

An aerial photograph of a tropical coastline. The image shows a narrow strip of white sand beach on the left, followed by a shallow turquoise lagoon with a sandy bottom. A dark, narrow strip of land, possibly a road or a path, runs parallel to the beach. To the right of this strip is a deep blue bay or lagoon. The background consists of lush green hills and vegetation. The overall scene is vibrant and scenic.

ECONOMICS WORKBOOK

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FOR USE WITH THE I.B. DIPLOMA PROGRAMME

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Chapter 1

The Foundations of Economics

Task 1 – Complete the missing words...

The fundamental problem in economics is that all resources are (limited) in, yet human wants and needs are Even resources (such as fish stocks, forestry and solar power) can become irreplaceable if their usage rate exceeds that of their natural replenishment rate. This means that households, businesses and governments have to make choices. In making a decision between competing choices (such as whether to study full time for a Master's degree or to work full time) a trade-off usually happens. Economists assume (sensible) decision making takes, i.e. consumers, producers and governments consider the overall costs and benefits of their various choices. By choosing the best option, the trade-off is the next best choice is given up – a concept known as In reality, humans do not always make rational choices. (We are often indecisive and make decisions based on intuition and emotions rather than rationality). For example, a cost-benefit analysis might suggest that smoking is harmful but people still choose to smoke.

A key theme in economics is therefore the extent to which a government should intervene in the economy. This determines the economic system that is implemented:

1. *Free market economy* – This occurs when the market forces of and supply allocate scarce resources. For example, an increase in the demand for a product will raise its price, *ceteris paribus* (everything else remains constant). Hence, in a free market economy there is minimal government intervention. Hong Kong is often considered as the world's freest economy.
2. *Planned (command) economy* – In this economic system, the allocates scarce resources. This system is often associated with communist (socialist) economies such as North Korea and Cuba.
3. *Mixed economy* – In this economic system, some resources are owned by individuals and businesses in the sector whilst other resources are owned by the sector (government). The government intervenes in economic activity to correct perceived market failures. The UK, France and Australia are examples.

Irrespective of the economic system in a country, there are three fundamental questions in economics that face all countries:

1. production should take place – For example, is it in the best interest of the economy to have more schools and hospitals or improved infrastructure?
2. production should take place – For example, is it feasible to use capital intensive technologies or is there a preference for specialisation of labour? Which raw materials should be used and should they be imported?
3. should production take place – For example, should health care services be provided for everyone in the economy such as non-tax payers, asylum seekers and immigrants?

For production to take place, four factors of production are required: land, labour, and enterprise.

..... refers to all natural resources such as raw materials, minerals and renewable energy (such as wind and solar power). refers to the human effort, both mental and physical, used in the production process.

..... refers to non-natural (manufactured) resources used to produce other goods and services. Examples include tools, machinery, buildings, vehicles and cash (money). Entrepreneurship refers to the management, organization and planning of production and the other three factor inputs in the production process. The respective rewards for the factors of production are: rent, wages, interest and These rewards are collectively known as

Task 2 – Key Terms Quiz

Read the definitions and identify the key terms. *Hint:* the answers appear in alphabetical order.

Key Term	Definition
	The Latin phrase that means ‘everything else remains constant’ which is a vital assumption made when examining different economic models.
	Due to scarcity, households, businesses and governments have to make this.
	Refers to the macroeconomic goal of improving a country’s gross domestic product through methods such as increasing productive capacity and product innovation.
	The academic discipline that studies how resource allocation can best meet the needs and wants of people in society.
	Factor input responsible for the organization, planning and management of land, labour and capital.
	Part of the central problem of economics is that these factor inputs are limited in supply.

	Costs measured in terms of the next best alternative foregone when making an economic decision.
	The study of economics that is provable, i.e. statements of fact or 'what' is, rather than opinions or 'what ought to be'.
	This diagram shows the maximum combination of two commodities that a nation can produce with all resources being efficiently used, per time period.
	The amount of satisfaction derived by an individual from the consumption of a good or service.

Task 3 – Explain...

a. why economics is considered as a social science.

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b. why the concept of ceteris paribus is important in economics.

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c. the central problem of economics.

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d. the meaning of equity (rather than equality) in economics.

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e. why infrastructure (such as telecommunications and transport networks) is an example of capital.

.....

.....

f. why the goal of economic efficiency could conflict with the goal of economic equity.

.....

.....

g. the opportunity cost of one producer good in terms of consumer goods, given the data in the table below:

Consumer goods		Producer goods
85	plus	30
75	plus	35

h. the opportunity cost of 1 kilo of strawberries in terms of kilos of potatoes for a farmer with the following production combinations:

Strawberries (kg)	Potatoes (kg)
27	81
30	72
33	63
36	54

Task 4 – True or False? 👍 📢

	True / False
a. Microeconomics is concerned with the economic actions of individuals and particular firms rather than the operations of the economy as a whole.	
b. The opportunity cost of a good is how much the product is worth to the owner.	
c. In economics, income refers to the wages and salaries received by labour.	
d. Economists argue that human wants can never be fulfilled completely because money simply cannot buy everything.	
e. The resources in an economy will inevitably increase over time.	
f. On a PPF diagram, the gradient (or marginal rate of transformation) of the PPF shows the opportunity cost of one commodity for another.	
g. Every economy faces the basic problem of scarcity and choice.	
h. Economists examine the extent to which governments should intervene in resource allocation and economic activity.	
i. Sustainable economic growth is important for the future development of the world's economies.	
j. An underlying assumption in economics is that people, firms and governments make rational decisions.	

Task 5 – Multiple Choice Questions ☑

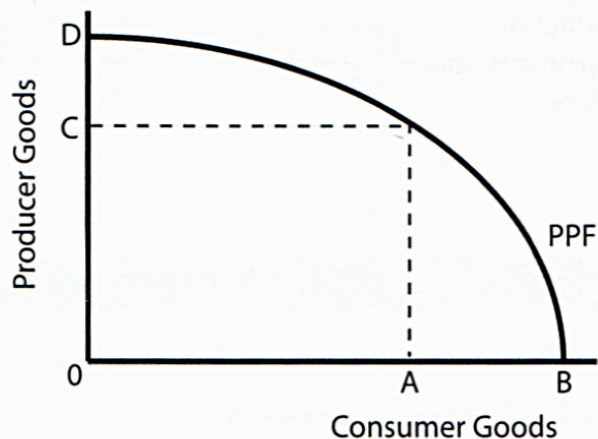
1. Which of the following is not within the scope of economics?
 - A. Resource allocation
 - B. Scarcity
 - C. The creation of government policies
 - D. What production should take place

2. What is the fundamental economic problem faced by all countries?
- A. Inflation
 - B. Unemployment
 - C. Scarcity
 - D. Economic recession
3. Which of the following is not a basic economic problem that an economy must strive to solve?
- A. Deciding what goods and services to produce
 - B. Determining the most efficient method of production
 - C. Deciding what ought to be the priority of government policy
 - D. Deciding for whom production should take place
4. Primary sector production is concerned with
- A. The manufacturing of goods
 - B. The provision of services
 - C. The construction of buildings
 - D. The extraction of natural resources
5. Which of the following is not a fundamental economic question?
- A. For whom production should take place
 - B. What production should take place
 - C. Why production should take place
 - D. How production should take place
6. Which of the following can be classed as an objective (positive) economic statement?
- A. The government should place higher taxes on wealthier people
 - B. Unemployment should rise when income taxes are continually raised
 - C. Unemployment in Spain is too high
 - D. Prosperous nations should donate more money to poorer countries
7. Microeconomics is concerned with
- A. The operations of the economy as a whole
 - B. How prices are determined in individual markets
 - C. Adjusting taxes and interest rates to manage the economy
 - D. The distribution of income and wealth in an economy
8. Which of these statements is normative?
- A. Factors of production are required to generate economic activity
 - B. Scarcity is the foundation of the basic economic problem
 - C. The government should aim to improve employment opportunities
 - D. A mixed economy has the benefits of providing both merit and public goods

9. Which of the following is not a component of income?

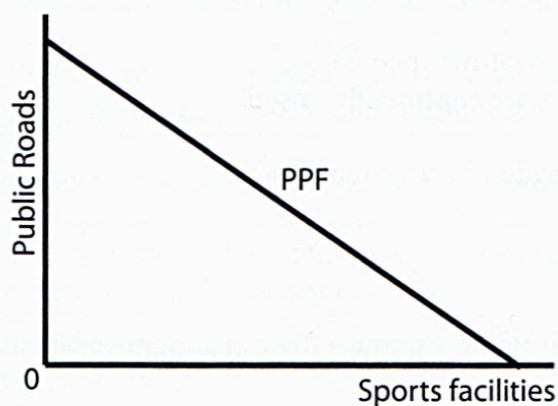
- A. Wages
- B. Rent
- C. Interest
- D. Sales revenue

10. The diagram below shows the production possibilities, PPF (Production Possibility Frontier), curve for an economy. By producing 0A of consumer goods, the economy forgoes



- A. 0B of consumer goods
- B. AB of consumer goods
- C. 0C of producer goods
- D. CD of producer goods

11. In the production possibility curve diagram below, it can be deduced that as more public roads are produced, the cost of producing more sports facilities in terms of public roads

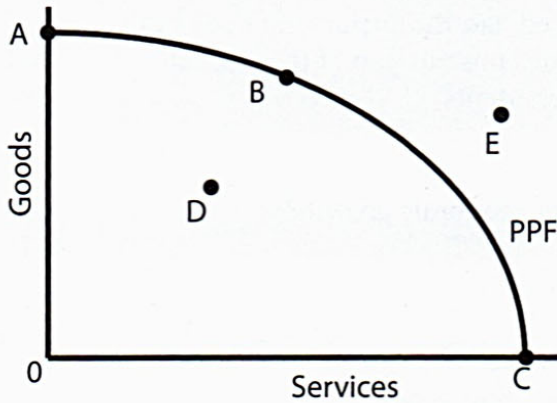


- A. falls continually
- B. rises continuously
- C. remains constant
- D. reaches zero

12. Which of the following concepts cannot be seen in a PPF diagram?

- A. Scarcity
- B. Rising opportunity cost
- C. Division of labour
- D. Marginal decision-making

13. Which point(s) in the production possibility curve below indicates that the economy could increase output without incurring an opportunity cost?



- A. Points A, B and C
 B. Point A and C
 C. Point D
 D. Point E
14. To be at a point on the production possibility frontier, all of the following conditions must be met except for which one?
- A. Full employment of resources
 B. Productive efficiency
 C. Allocative efficiency
 D. Zero opportunity cost
15. Which of the following is not an assumption made when drawing a production possibility frontier?
- A. At any point in time, there is a fixed amount of resources in the economy
 B. There is a constant state of technology
 C. All resources are used efficiently
 D. Society wants more than it needs
16. Spake bought a games console for \$300 but never used it. The second-hand value is \$200. The opportunity cost of Spake owning the games console is therefore
- A. \$0
 B. \$100
 C. \$200
 D. \$300
17. Assume that a firm can produce a number of possible combinations of two products: either 5,000 units of Alpha and 4 000 of Beta OR 6,000 units of Alpha and 3,000 Beta. What is the opportunity cost of producing the extra 1 000 units of Alpha?
- A. 1,000 units of Beta
 B. 2,000 units of Beta
 C. 3,000 units of Beta
 D. Nothing

18. The opportunity cost to society of constructing a new airport would be
- A. the money spent used to construct the airport
 - B. the other projects that could have been produced had the airport not been built
 - C. the overall cost to the government to finance the construction of the airport
 - D. the cost of relocating and compensating local residents
19. Which of the following does not apply to the concept of economic growth?
- A. Increased productive capacity of the economy
 - B. A result of population growth
 - C. Caused by innovation of new products and services
 - D. Initiatives in social inclusion
20. Economic development is specifically concerned with
- A. Sustained efforts to promote standards of living
 - B. Increasing the economy's productive capacity
 - C. Increasing an economy's gross domestic product
 - D. Ensuring equity in the allocation of scarce resources

Chapter 2

1.1 Competitive markets – Demand

Task 1 – Complete the missing words...

Demand refers to the willingness and of customers to pay certain prices in order to obtain goods and services. The refers to the amount demanded at each price level, per period of time. The theory of demand states that at higher price levels, a quantity is demanded, *ceteris paribus*. Hence, the quantity demanded is *inversely* related to that product's

Price has two effects on the demand for a product:

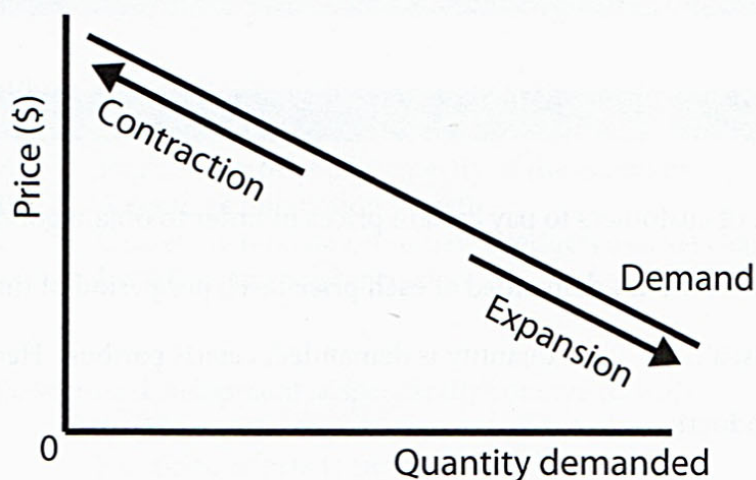
- The *income effect* – as price falls, the real income of consumers will Hence they are able to purchase more products at a price.
- The *substitution effect* – as the price of a product, it becomes relatively more attractive to consumers so they are more likely to substitute it for alternative products that they might have previously bought.

However, price is not the only factor that affects the quantity demanded. There are many other factors, such as:

- Income (some economists argue that income is the key determinant of demand)
- Price of alternatives (.....)
- Price of products
- Habits and tastes
- The utility (or) derived from consuming the product
- Marketing, such as persuasive and/or informative advertising
- Government policies, such as the imposition of on tobacco and alcohol
- State of the economy, such as whether the economy is in a or recession
- Others - such as the weather and demographics (e.g. age, gender, ethnicity or religious beliefs).

Changes in income do not really affect the quantity demanded for inexpensive products or, such as salt and household matches. The level of income does affect the quantity demanded of commodities such as furniture and cars. Collectively, necessities and luxuries are known as goods. By contrast, the demand for goods falls as income levels rise. Examples include supermarket own-label brands and public transport.

As price fluctuates, there is a along the (existing) demand curve. This occurs if, and only if, price changes. An in price causes a contraction in demand, whereas a in price results in an expansion in demand.



Unusual demand curves (when the demand curve slopes upwards from left to right) can exist in three cases:

- **Ostentatious buying** – certain goods are bought *because* of their high price, in order that their possession might impress. Hence, quantity demanded actually falls if price falls as the snob appeal is less apparent. Examples include women’s designer perfumes, extravagant jewellery and custom-made luxury sports cars. These goods are often known as goods, named after the American economist.
- **Expectations** or speculation of further increases in price – demand will tend to when prices are expected to rise. With the expectation of further increases, existing quantity demanded might rise. This often applies in the stock market, where rising prices can boost speculative demand for shares, thereby increasing their values as a result.
- **Giffen goods** are inferior products named after 19th century Scottish economist Robert Giffen who noticed that when the price of bread fell, consumers (particularly the poor) spent money on bread but more on relatively superior goods, such as meat and fruit. By contrast, when the price of bread increased, consumers demanded bread, being unable to afford the superior and more expensive goods. It is debatable whether Giffen goods exist today but their theoretical possibility has stood the test of time.

Numerical example of Giffen goods

- A consumer has \$5 to spend.
- S/he buys 3 packs of potatoes at \$1.20 each plus 1 pack of sausages at \$1.40 (\$3.60 + \$1.40).
- Assume the price of potatoes subsequently falls by 10% to \$1.08 per pack.
- The consumer can now buy 2 packs of sausages (\$2.80) plus 2 packs of potatoes (\$2.16).
- Hence, as the price of potatoes falls (the Giffen good) its demand also falls.

Higher Level

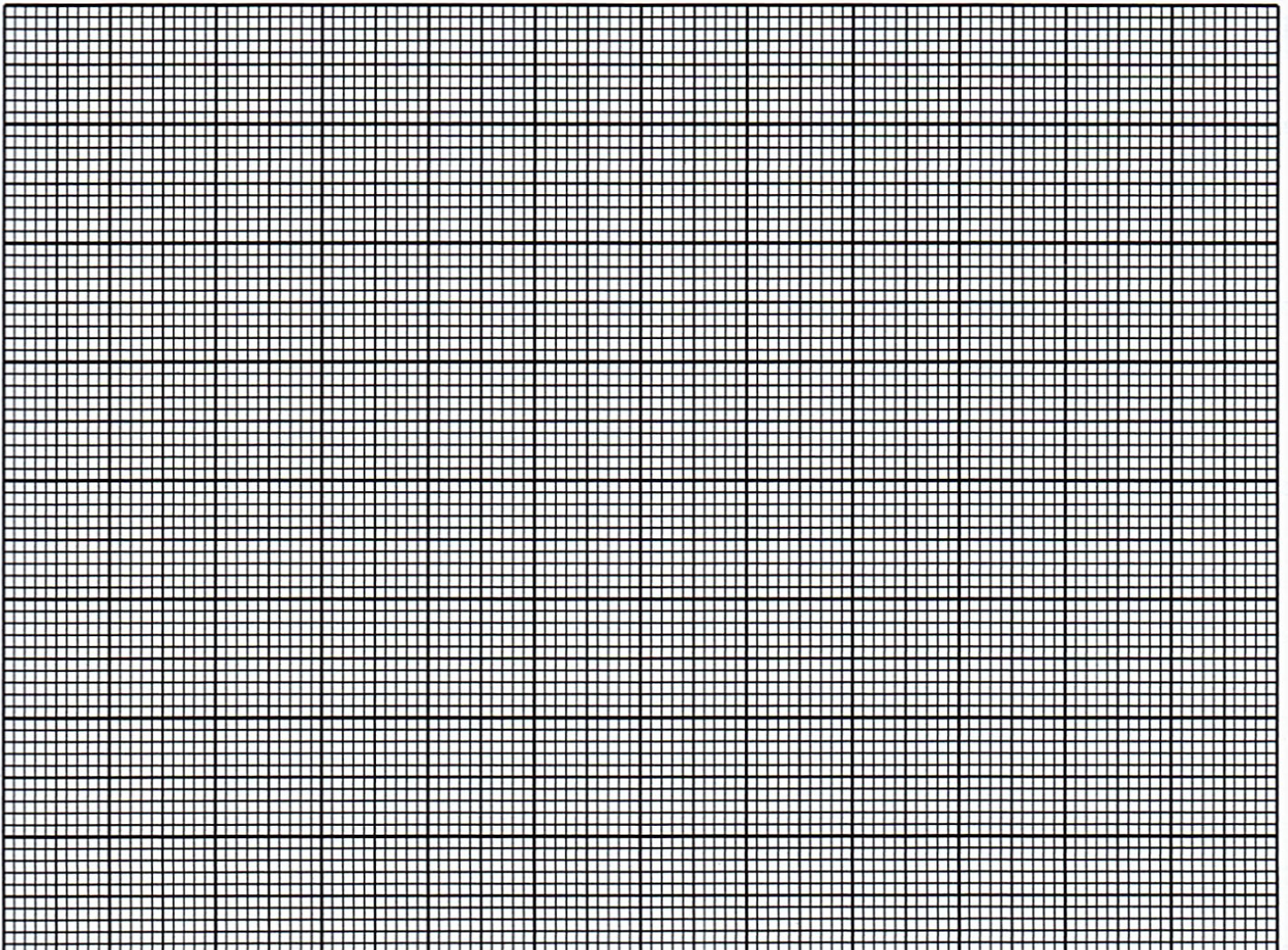
If the demand function is given as $Q_d = 600 - 15P$, the demand curve will intercept the y-axis at a price of \$.....

Task 2 – Plotting demand schedules ✍

Using the graph paper below, plot the two demand schedules and comment on your findings.

Price (\$)	Quantity demanded (Hotdogs per week)
1.50	7000
1.75	4000
2.00	2000
2.25	1250
2.50	750

Price (\$)	Quantity demanded (bottled water, bottles per day)
1	4000
2	3600
3	2500
4	1800
5	1500



Task 3 – True or False? 🇧🇪 🇧🇪

	True / False
a. Demand refers to an entire demand curve.	
b. Quantity demanded refers to a point on a demand curve.	
c. Inferior goods are those that are classified as having poor quality.	
d. The imposition of a goods and services tax shifts the demand curve to the left.	
e. Most goods have the feature of diminishing marginal utility.	
f. When the demand for a product increases with income, it is called a normal good.	
g. If the demand function is $Q_d = 600 - 20P$, then the demand curve will intercept the price axis at \$20. (HL Only)	
h. The substitution effect refers to the condition of demand that causes consumers to buy more of a product when the price falls, because it is relatively cheaper.	
i. There is a movement along a demand curve if there is a change in the disposable income of consumers.	
j. Smartphones and downloadable applications (apps) would be considered as complementary goods.	

Task 4 – Explain... 📄

a. The difference between a shift and a movement in demand

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b. How natural disasters, such as hurricanes can push oil prices up.

.....

.....

c. As the price of product Y increases, what happens to the quantity demanded for product X?

.....

.....

.....

Task 5 – Diagrams

With the aid of an appropriate diagram, analyse the impact on the demand for tuna fish from the following events:

a. An increase in the price of cod

.....

.....

b. A successful marketing campaign that portrays tuna fish being part of a healthy diet

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.....

c. An increase in households' income

.....

.....

d. A sudden increase in unemployment

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.....

Task 6 – Multiple Choice

1. Which factor below is not a determinant of demand?

- A. Price
- B. Income
- C. Consumer confidence levels
- D. Goods and services tax

2. Other things being equal, an increase in demand will result in

- A. An increase in the cost of the product
- B. A fall in the price of the product
- C. An increase in the price and a rise in the quantity traded
- D. An increase in the price and a fall in the quantity traded

3. The purchase of exclusive and prestigious products due to their extremely high price known as

- A. Ostentatious consumption
- B. Inconspicuous consumption
- C. Autonomous consumption
- D. Private consumption

4. Which option is most likely to result in a movement along the demand curve for hybrid (energy efficient) cars?

- A. A rise in the price of alternative fuel cars
- B. A successful advertising campaign that promotes energy efficient travel
- C. The imposition of a sales tax on all motor vehicles
- D. A rise in consumer income levels

5. Demand backed by willingness and ability to pay is known as
 - A. Competitive demand
 - B. Effective demand
 - C. Joint demand
 - D. Aggregate demand

6. Which of the following is not a feature of inferior goods?
 - A. There is a negative relationship between income and quantity demanded
 - B. Products tend to be basic and often low-priced
 - C. Such products have higher priced alternatives
 - D. Applies to all products that are higher in demand during an economic recession

7. A change in the demand for a product does not occur as a result of a change in
 - A. The price of complementary goods
 - B. Technological progress
 - C. Consumer habits and tastes
 - D. Income

8. Which of the following is likely to result in a shift in the demand curve for Wrigley's chewing gum?
 - A. A reduction in the price
 - B. Improved packaging
 - C. A rise in the cost of sugar
 - D. A sales tax on chewing gum

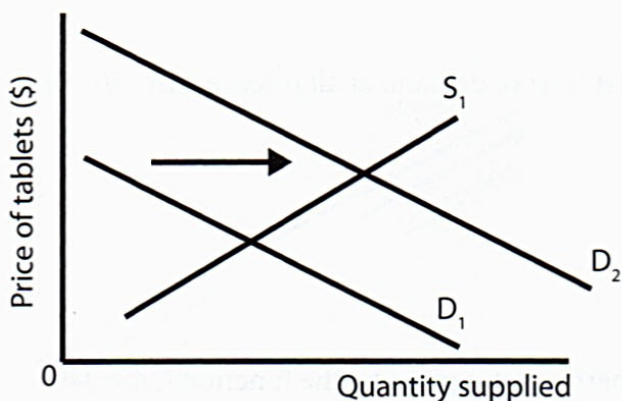
9. Which of the following reasons does not explain why a supply curve generally slopes upwards?
 - A. Less firms are attracted to the industry as market prices fall
 - B. Price and supply are inversely related
 - C. Profit margins rise at higher prices
 - D. More suppliers are able to produce as prices increase

10. Identify the factor that does not directly affect the demand for Ducie Financial Services Company
 - A. Consumer confidence levels in stock and financial markets
 - B. Income levels of customers
 - C. The fee of using their financial services
 - D. A change in qualifications needed to work in financial services

11. Which of the following factors is most likely to cause the demand curve for gold to shift to the right?
 - A. Anticipation of an increase in gold prices in the near future
 - B. A fall in the price of silver
 - C. An increase in the domestic exchange rate
 - D. Stable foreign exchange markets

12. Which of the following does not explain the downward sloping nature of the demand curve?
- Diminishing marginal utility
 - Income
 - Substitution effects
 - Opportunity cost
13. The law of demand considers a change in which factor below to cause a shift in the demand curve?
- Raw material prices
 - Income tax rates
 - The state of technology
 - Factor substitution
14. An increase in which of the factors below is most likely to cause the price of paper to rise without a shift in the demand curve for paper?
- The number of students attending university
 - The productivity of paper manufacturers
 - Wage rates paid to paper factory workers
 - An increase in the demand for laptop computers

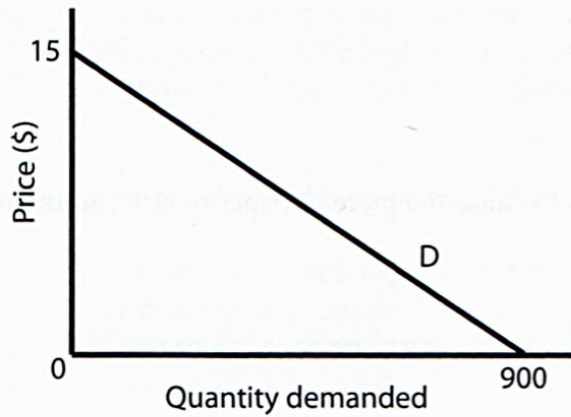
15. Which of the following scenarios is likely to cause the demand to shift from D_1 to D_2 in the diagram below for digital tablet computers?



- An increase in the retail price of tablet computers
 - A fall in the retail price of tablet computers
 - A cut in income tax rates
 - An increase in the demand for laptop computers
16. If the demand function for a product is given as $Q_d = 30 - 5P$, then the quantity intercept would be (HL Only)
- 30 units
 - 25 units
 - 6 units
 - 5 units

17. If the demand function is $Q_d = 800 - 25P$, at what price will the demand curve intercept the y-axis (*HL Only*)
- A. \$25.0
 - B. \$31.25
 - C. \$32.0
 - D. \$800.0

18. From the diagram below, the linear function of the demand curve is (*HL Only*)



- A. $15 - 900P$
 - B. $900 - 15P$
 - C. $900 - 60P$
 - D. $15 - 16.6P$
19. Which of the demand functions below has the lowest level of demand at all price levels? (*HL Only*)
- A. $Q_d = 600 - 60P$
 - B. $Q_d = 750 - 50P$
 - C. $Q_d = 800 - 60P$
 - D. $Q_d = 850 - 50P$
20. Suppose the daily demand for organic bread at a supermarket is given by the function $Q_d = 245 - 5P$. What is the daily revenue from the sale of bread if the price is \$5 per loaf? (*HL Only*)
- A. \$220
 - B. \$1,100
 - C. \$1,200
 - D. \$6,125

Chapter 3

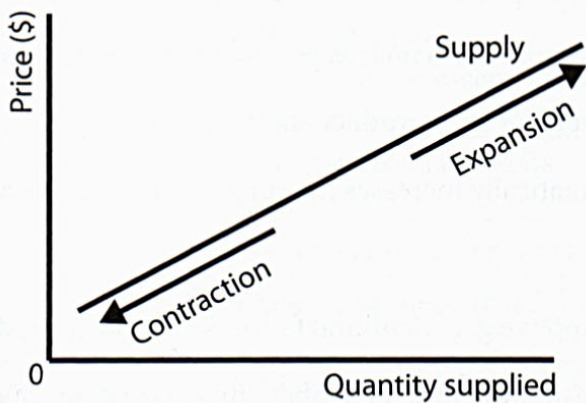
Competitive markets – Supply

Task 1 – Complete the missing words...

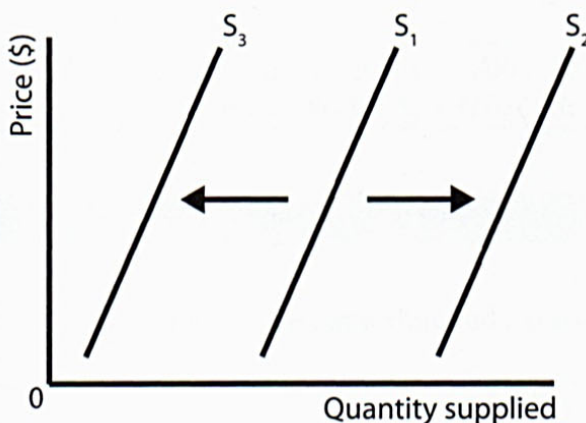
Supply refers to the willingness and of firms to produce or provide goods and services at each price level, per time period. The theory of supply states that a larger quantity will be supplied at prices, ceteris paribus, i.e. there is a direct (or positive) relationship between quantity supplied and

As the price increases, firms are likely to expand output because:

- Existing firms can take advantage of higher prices to earn greater margins.
- New firms are attracted to the market if they can cover their production due to the higher price.



A along the supply curve occurs if, and only if, price changes. A change in q is brought about by changes in price. Supply as price increases, and as the price falls.



By contrast a in the supply curve is caused by all non-price factors, i.e. there is a change in supply. In the diagram, a rightwards shift (S_1 to S_2) represents an increase in supply, whereas a leftward shift (S_1 to S_3) shows a fall in supply.

Determinants of Supply

For any given supply curve, it is assumed that only changes, i.e. it is assumed that other factors remain constant. Essentially, all non-price factors that affect supply impact on the costs of production. Specific examples of factors that affect supply include:

- The price of raw materials – If the cost of the factors of production falls, the supply curve will shift to the, ceteris paribus. Hence, more will be supplied at each price level, as costs of production fall (vice versa).
- Technological progress – Advances in technology mean that there can be greater levels of production and output at each and every price level. Hence, the supply curve will shift to the right.
- Taxes – Duties and levies imposed on the supplier are effectively an addition to production costs, and therefore reduce the supply. Hence, the imposition of a tax would shift the curve to the, ceteris paribus.
- Subsidies – Financial assistance from the government helps to reduce costs of production. These are usually granted for the production or provision of that exert benefits to society, such as education, training and health care.
- Price of related goods – Some goods are in c..... s....., i.e. the output of one product (such as corn) can quite easily be produced as an alternative to another product (such as potatoes). The relative price and profitability of the two products determines the level of supply for each product. In the case of j..... s....., an increase in the production of one product automatically increases the supply of the other (joint) product, such as cows and milk or lamb and wool.
- Time – Over time, producers tend to be able to increase their supply, e.g. agricultural farmers. For other producers, new resources might be discovered in time, thereby increasing the level of supply. By contrast, producers may choose to withhold supply if prices are expected to in the near future.

Task 2 – Key Terms

Identify the key terms from the given clues. *Hint:* answers appear in reverse alphabetical order.

	Government levies (duties) that increase costs of production, thereby shifting the supply curve to the left at each price level.
	The willingness and ability of firms to supply a product at given price levels, per time period.
	Government assistance which helps to reduce the costs of production, thereby shifting the supply curve to the right at each price level.
	The sum of individual supply curves at each price level.
	This rule states that higher quantities will be supplied at higher price levels.

Task 3 – True or False? 🙋🙋

	True / False
a. Supply refers to an entire supply curve.	
b. As price increases, the supply tends to fall.	
c. The supply curve has a positive slope due to the positive correlation between Price and Quantity supplied.	
d. A higher price creates more incentives for firms to increase output or for new firms to enter the market.	
e. An increase in corporation tax causes a fall in quantity supplied, <i>ceteris paribus</i> .	
f. The introduction of a unit subsidy causes a rise in supply, <i>ceteris paribus</i> .	
g. Higher production costs mean that firms require a higher price to create incentives to produce.	
h. If the price of chickens drops dramatically, the price of chicken eggs would rise, <i>ceteris paribus</i> .	
i. If supply increases, <i>ceteris paribus</i> , equilibrium price will fall and the quantity sold will rise.	
j. If the supply function is $Q_s = -600 + 20P$, then the minimum price before suppliers enter the market is \$20. (<i>HL Only</i>)	

Task 4 – Explain... 📄

a. The difference between a shift and a movement in supply.

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b. How extreme weather conditions can affect the supply of agricultural products.

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c. Any two factors that can cause the supply curve to shift to the left.

d. Why the supply for digital music downloads might contract.

e. Why a supply function, such as $S = -400 + 40P$, has a negative coefficient (*HL Only*).

f. Why a supply function, such as $S = 800 + 60P$, might have a positive coefficient (*HL Only*).

Task 5 – Diagrams ✍

With the aid of a diagram, outline the impact on the market for laptop computers from the following events:

- a. The application of a per unit subsidy on laptops used for educational purposes
- b. A new government directive requiring new expensive software to be installed on all new laptops to combat piracy and prevent illegal online activities.
- c. A 10% government tax imposed on all foreign laptops
- d. An increase in the average wage rate of those working in factories that manufacture laptops
- e. An increase in interest rates (think carefully about this one)

Task 6 – Multiple Choice ☑

1. Which of the following factors is a determinant of the supply curve for a product?

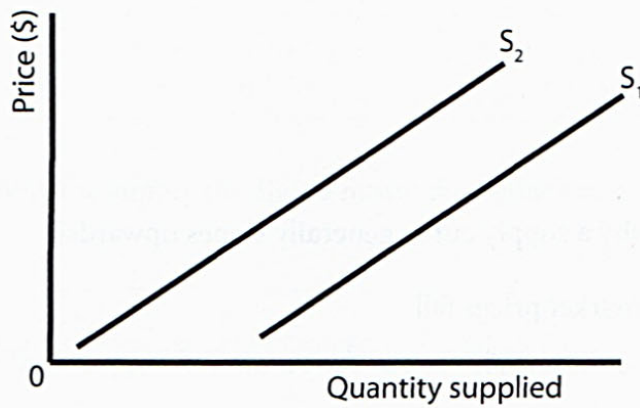
- A. Habits, fashion and tastes
- B. Consumer income levels
- C. Subsidies from the government
- D. The price of substitute goods and services

2. Determinants of supply do not include

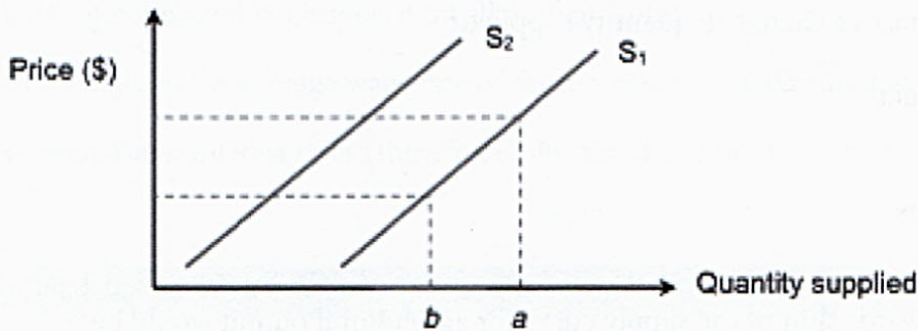
- A. Direct taxes
- B. Goods and services tax
- C. Price
- D. Time

3. A change in the supply for a product occurs as a result of a change in
- A. The price of complementary goods
 - B. Technological progress
 - C. Consumer habits and tastes
 - D. Income
4. Which of the following reasons does not explain why a supply curve generally slopes upwards?
- A. Less firms are attracted to the industry as market prices fall
 - B. Price and supply are inversely related
 - C. Profit margins rise at higher prices
 - D. More suppliers are able to produce as prices increase
5. Which of the following does not affect the supply of rice?
- A. Scarcity of land
 - B. Weather conditions
 - C. Higher transportation costs
 - D. Income tax
6. Which of the following statements does not apply to a supply curve?
- A. The supply curve shows a direct relationship between price and quantity supplied
 - B. It reveals the degree of price elasticity of supply
 - C. A rise in unemployment in the economy will shift the supply curve to the left
 - D. The market supply curve is made up of the sum of all individual supply curves in the market
7. Which of the factors below causes a change in quantity supplied?
- A. The price of the product
 - B. Technology
 - C. Taxes
 - D. Discovery of resources
8. The best explanation of a leftwards shift of the supply curve for agricultural output would be
- A. A fall in the price of agricultural products
 - B. Primary sector firms exploiting economies of scale
 - C. Government subsidies granted to domestic farmers
 - D. Higher labour costs in the industry

9. Which of the options below can explain the following shift in supply for rice?

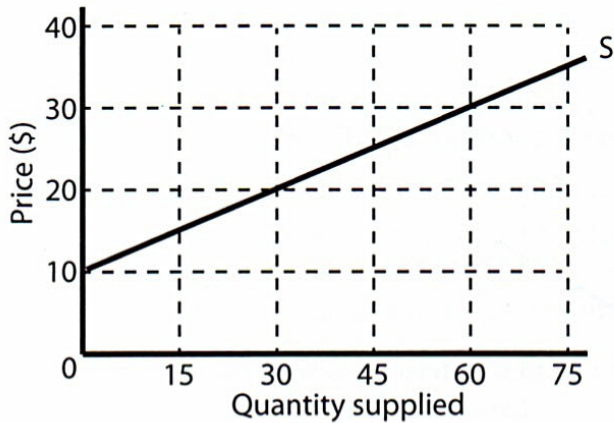


- A. Improved weather conditions
 - B. An fall in domestic income levels
 - C. Government subsidies for rice growers
 - D. Higher wages paid to rice growers
10. Ceteris paribus, a in the supply of a product will result in a in its price.
- A. rise, fall
 - B. rise, rise
 - C. fall, fall
 - D. movement, contraction
11. In the diagram below, a decrease in supply is shown by



- A. The movement from point a to point b on the quantity axis
 - B. A shift in supply from S_1 to S_2
 - C. A shift in supply from S_2 to S_1
 - D. The contraction along the S_1 curve from point a to point b
12. Which of the factors below directly affects the supply of a product?
- A. Consumer income levels
 - B. Changes in taxes and subsidies from the government
 - C. Changes in habits, fashion and tastes
 - D. The price of related goods and services

13. Which of the following would shift the supply curve of Cadbury chocolate bars to the left?
- An increase in the price of Cadbury chocolate bars
 - An increase in cocoa prices
 - Improved weather conditions for growing cocoa beans
 - Improved production technologies at Cadbury factories
14. If the supply function is given as $Q_s = -300 + 15P$, what is the minimum price that firms will accept before they supply any products (*HL Only*)
- \$5
 - \$15
 - \$20
 - \$300
15. What is the equation of the supply curve in the diagram below? (*HL Only*)



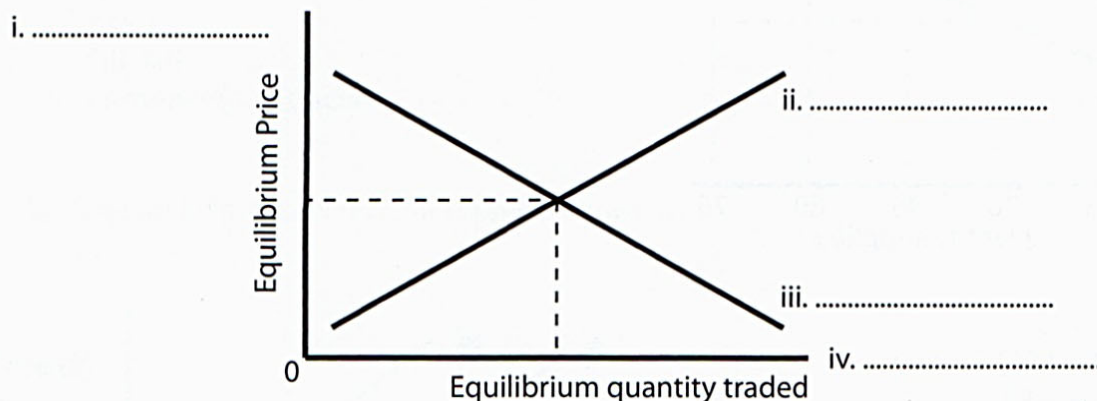
- $P = 10 + Q$
- $P = 10 + 1.5Q$
- $P = 40 + 10Q$
- $P = 0.5Q$

Chapter 4

1.1 Market equilibrium

Task 1 – Complete the missing words...

The equilibrium price (or m..... c..... price) is established when the market price leads to no excess in either quantity demanded or quantity supplied. Changes in the conditions of demand and supply will cause a change in the equilibrium price and quantity traded. For example, a health scare linking alcohol or smoking with heart disease will shift the curve for alcohol and cigarettes to the Alternatively, severe flooding will shift the of agricultural output to the left, thereby increasing the and reducing the quantity traded.




Higher Level

The function can be expressed as: $Q = a - bP$ whereas the function can be shown as: $Q = c + dP$. Hence, equilibrium exists when $a - bP = c + dP$. For example, suppose $Q_d = 300 - 4P$ whilst and $Q_s = 2P$. This means that equilibrium will exist when $300 - 4P = 2P$. Hence, the equilibrium price is whilst the equilibrium quantity traded is units.

Task 2 – Key Terms

Identify the key terms from the given clues. *Hint:* all answers appear in alphabetical order and begin with 'E'.

	This condition holds when the market is cleared of any shortages or surplus. It occurs when quantity demanded is equal to the quantity supplied.
	The price where quantity demanded equals quantity supplied, per time period.
	This occurs at price levels below the equilibrium when there is a shortage.
	This surplus exists when the price is set above the market equilibrium price.

Task 3 – True or False?  

	True / False
a. If the price of a product is set above the equilibrium price, there will tend to be excess supply.	
b. The equilibrium price of a good or service is not influenced by the government.	
c. A high market price acts as a signal to firms to increase their supply.	
d. A lower market price caused by a higher level of market supply will cause an increase in the quantity demanded.	
e. Prices tend to change due to the forces of supply and demand.	
f. When the market exhibits disequilibrium, government intervention is needed to prevent a situation of excess demand or excess supply.	
g. Two major consequences of imposing maximum prices are longer queues and the emergence of parallel markets.	
h. For a market to exist there must be scarcity.	
i. Severe flooding in an area of tea production will cause the demand curve to contract.	

Task 4 – Explain... 

a. What would happen in the market if price was set too high (i.e. above the equilibrium price)

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b. What would happen in the market if price was set too low (i.e. below the equilibrium price)

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c. An advantage of being a price maker

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d. One advantage of being a price taker

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e. Why the supply function usually has a negative coefficient, such as $Q_s = -300 + 15P$ (*HL Only*)

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f. Why it is possible for a supply function to have a positive intercept, such as $Q_s = 300 + 20P$, on the price axis, i.e. there is supply at zero price (*HL Only*)

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Task 5 – Diagrams

With the aid of an appropriate diagram, explain how the following changes would affect the equilibrium price of the product in question:

a. The market for motor vehicles following a sustained period of higher fuel prices.

b. A sustained increase in petrol prices on the market for public transport.

c. The government imposes a sales tax on the purchase of all goods and service.

Task 6 – Calculations (*HL Only*)

a. Calculate the equilibrium price from the following demand and supply linear functions

i. $Q_s = 10P$ and $Q_d = 45 - 5P$

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ii. $Q_d = 500 - 50P$ and $Q_s = -300 + 100P$

.....

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- b. i. Plot the demand and supply curves from the data below for meals at a restaurant per week.

Price (\$)	Qd	Qs
10.00	60	100
9.0	70	90
8.0	80	80
7.0	90	70
6.0	100	60

- ii. Label the demand and supply functions accordingly on your (fully labelled) diagram.

- iii. Use your demand and supply linear functions to work out the equilibrium price and quantity traded each week.

- iv. Show on your chart the excess supply at \$9.00 per meal and the excess demand at \$6 per meal.

- c. Calculate the following from the given linear functions below:

- $Q_d = 650 - 20P$
- $Q_s = -300 + 15P$

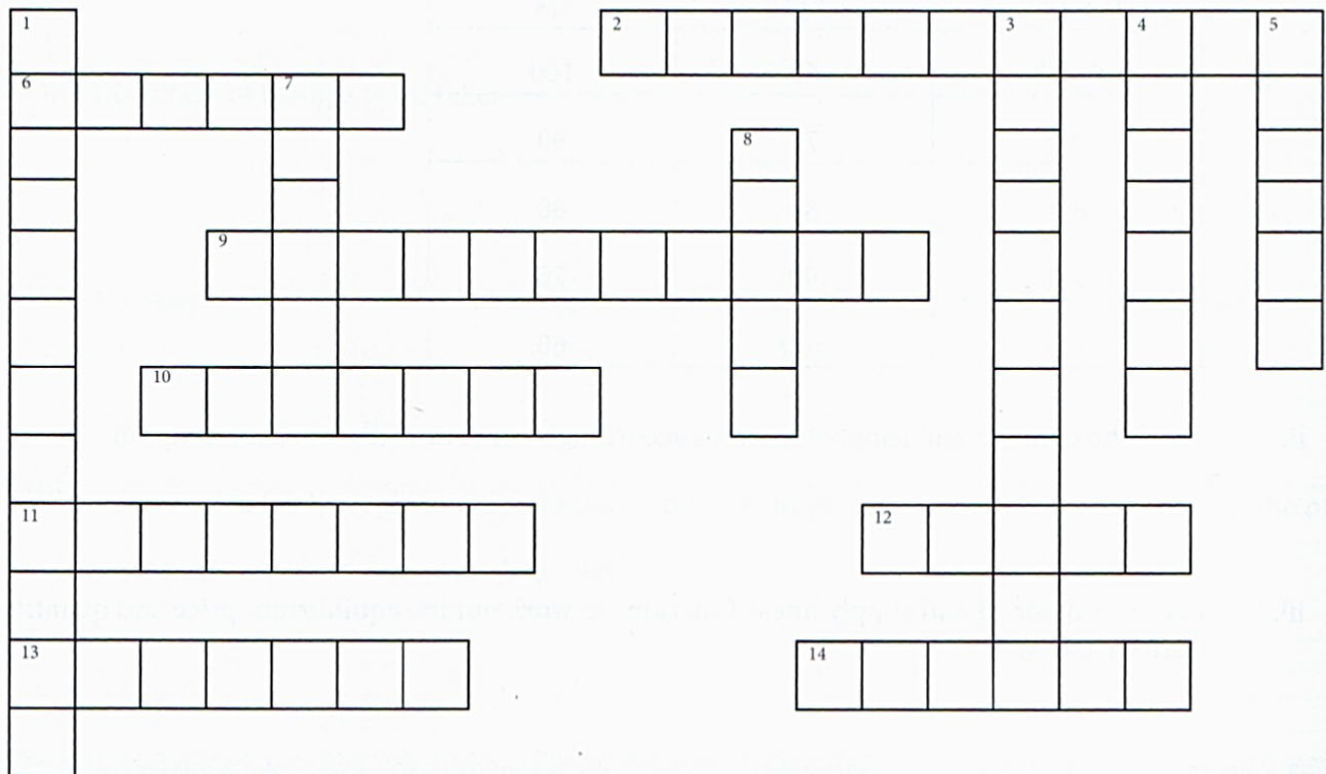
- i. Equilibrium price

- ii. Equilibrium quantity traded

- iii. Excess demand at a price of \$20

- iv. Excess supply at a price of \$32

Task 7 – Crossword 



Clues across

- 2. The condition that states the quantity demanded rises as price falls, ceteris paribus. (3,2,6)
- 6. The willingness and ability of firms to provide goods or services at different price levels. (6)
- 9. The purchase and use of a good or a service. (11)
- 10. Another word for excess supply. (7)
- 11. Goods that increase in demand when income levels fall. (8)
- 12. Changes in non-price factors affecting demand or supply cause this. (5)
- 13. The satisfaction of consumption of a good or service. (7)
- 14. Category of goods that increase in demand as income levels rise. (6)

Clues down

- 1. A form of consumption that involves purchasing highly expensive products. (12)
- 3. The condition that holds when demand equals supply. (11)
- 4. These marketing activities aim to shift the demand curve for a product to the right. (7)
- 5. The willingness and ability of consumers to purchase a product at different price levels. (6)
- 7. Physical and mental human effort in the production of goods and provision of services. (6)
- 8. Arguably the most important factor that affects both demand and supply. (5)

Task 8 – Multiple Choice

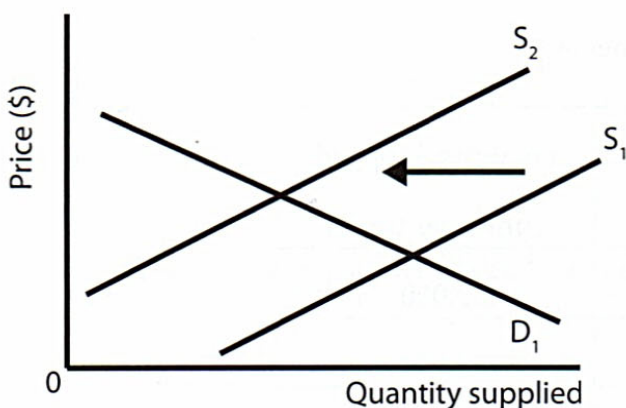
1. Which of the following does not apply to equilibrium price?
 - A. It is affected by both the forces of demand and supply
 - B. It exists when there is either excess demand or excess supply
 - C. There is no tendency for price to change
 - D. Buyers and sellers are willing and able to trade at the same price level

2. When the market price is set above the equilibrium price, there is a tendency for
 - A. Market price to rise
 - B. Market price to fall
 - C. Quantity traded to rise
 - D. Excess demand

3. Which statement applies to the price mechanism?
 - A. High prices can be used to limit demand for scarce goods and services
 - B. Firms make abnormal profits by charging high prices
 - C. Firms and consumers take account of social costs of production and consumption
 - D. Prices are usually regulated by the government

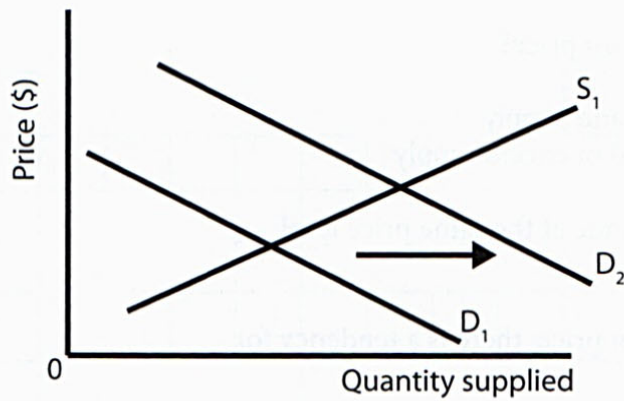
4. The size of a market is not limited by the
 - A. Nature of the product being traded
 - B. Need for physical contact between buyers and sellers
 - C. Time period under consideration
 - D. Government rules and regulations

5. In the diagram below for agricultural output, the change in supply is likely to have been caused by



- A. A rise in income tax rates
- B. A rise in the cost of fertilisers
- C. A fall in the income of farmers
- D. Favourable weather conditions

6. In the diagram below, the shift in demand for smartphone applications is likely to be caused by



- A. A fall in the price of smartphones
 - B. An increase in the level of interest rates
 - C. A lower sales tax on goods
 - D. A fall in the price of laptop computers
7. Which of the following factors can explain a rise in the equilibrium price of new houses in a city?
- A. An increase in interest rates
 - B. Government permission to build more new homes in the city
 - C. A fall in the cost of constructing new homes
 - D. A rise in consumer incomes
8. If market research shows that the average price of shampoo in a country has fallen during the past year whilst the quantity traded has also fallen, it can be deduced that there has been
- A. A fall in the market supply of shampoo
 - B. Increased market supply of shampoo
 - C. A fall in market demand of shampoo
 - D. Increased market demand of shampoo

Questions 9 – 10 refer to the demand and supply schedule below:

Price (\$)	Quantity Demanded (units per week)	Quantity Supplied (units per week)
15	9,000	2,000
20	8,000	4,000
25	7,000	6,000
30	6,000	8,000
35	5,000	10,000

9. At a price of \$25, the market shows

- A. Market equilibrium
- B. Excess supply
- C. Excess demand
- D. Stockpiling

10. After four weeks of trading at price of \$30, suppliers will have accumulated
- A. 2,000 units
 - B. 8,000 units
 - C. 24,000 units
 - D. 32,000 units

Questions 11 – 15 refer to the demand and supply functions for a product which are given by the equations:
 $P = 30 - 0.06Q$ and $P = -15 + 0.08Q$

11. The equilibrium price and quantity are given by (*HL Only*)

- A. $P = 29$ and $Q = 300$
- B. $P = 300$ and $Q = 29$
- C. $P = 45$ and $Q = 15$
- D. $P = 15$ and $Q = 45$

12. What is the equation of the demand function? (*HL Only*)

- A. $Q_d = 12,000 - 200P$
- B. $Q_d = 5,000 - 200P$
- C. $Q_d = 5,000 - 35P$
- D. $Q_d = 12,000 - 5P$

13. What is the equation of the supply function? (*HL Only*)

- A. $Q_s = -2,000 + 400P$
- B. $Q_s = 0 + 400P$
- C. $Q_s = 2,000 + 400P$
- D. $Q_s = 2,000 + 5P$

14. What is the equilibrium price? (*HL Only*)

- A. \$21.33
- B. \$22.67
- C. \$23.33
- D. \$24.50

15. What is the equilibrium quantity traded? (*HL Only*)

- A. 5,833
- B. 6,250
- C. 6,667
- D. 7,334

Chapter 5

1.1 Market efficiency

Task 1 – Key Terms ✍

Identify the key terms from the given clues. *Hint:* answers appear in alphabetical order.

	This occurs when resources are distributed in such a way that consumers get the maximum possible benefit from the current combination of goods and services being supplied.
	This refers to the benefits gained by consumers when they are able to buy a product for less than they are willing to pay.
	This refers to the extra benefit, or utility, gained from consuming an extra unit of a good or service.
	This type of cost refers to the extra cost of producing or supplying an extra unit of output.
	This occurs when producers receive a higher price than they are willing and able to supply at.

Task 2 – True or False? 👉 🗣

	True / False
a. The difference between the willingness to pay and the amount actually paid is called consumer surplus.	
b. Consumer surplus is the value of consuming a good or service minus the market price paid by the consumer.	
c. Economists regard technological progress as a long run phenomenon.	
d. Social surplus is the sum of consumer surplus and producer surplus.	
e. Allocative efficiency occurs when a market is in equilibrium as both consumer and producer surplus is maximised at this point.	
f. Allocative efficiency will increase with greater output so long as the marginal benefit to society is greater than the marginal cost of doing so.	
g. Allocative efficiency is optimised when marginal benefit equals marginal cost.	
h. Marginal cost is should calculated as the total cost divided by the amount of output.	
i. Marginal costs are the variable costs associated with increasing output in the long run.	
j. When price is set equal to marginal cost, economic welfare is maximised as the price consumers are willing and able to pay matches the costs of production.	

Task 3 – Multiple Choice

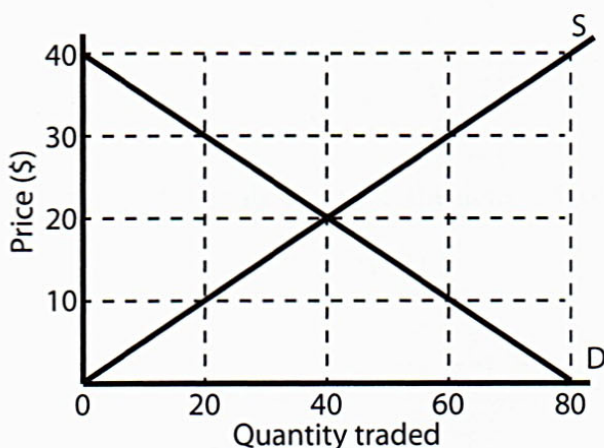
1. The difference between what customers are willing and able to pay for a product and the actual price paid for it is known as the
 - A. Quantity traded
 - B. Consumer surplus
 - C. Disposable income
 - D. Excess demand

2. Social surplus is calculated as
 - A. Producer surplus plus consumer surplus
 - B. Social benefit plus private benefit
 - C. Welfare gain minus welfare loss
 - D. Marginal benefit minus marginal cost

3. Allocative efficiency occurs when
 - A. Consumer surplus and producer surplus are maximised
 - B. Consumer surplus exceeds producer surplus
 - C. Producer surplus ensure all firms enjoy economies of scale
 - D. Price is equal to average costs of production

4. Consumer surplus can be defined best as
 - A. A consumer's marginal utility of consumption being greater than the price paid
 - B. When consumers pay a price below the market equilibrium price
 - C. When consumers can choose between alternative products in the market
 - D. A low opportunity cost of consumption of a product

Questions 5 – 6 refer to the diagram below:



5. The value of consumer surplus in the diagram below is
 - A. \$400
 - B. \$600
 - C. \$750
 - D. \$800

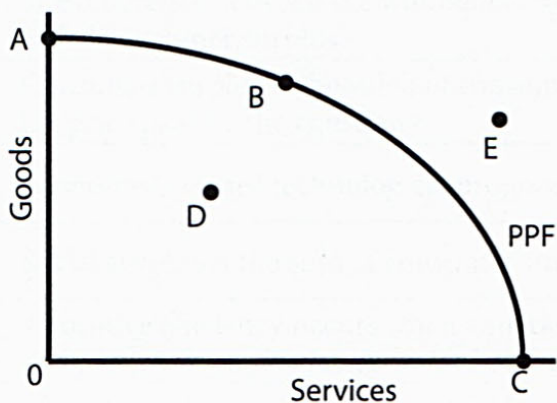
6. The value of producer surplus in the diagram above is
 - A. \$400
 - B. \$600
 - C. \$750
 - D. \$800

7. If the price falls from \$30 to \$20, then the change in consumer surplus is
 - A. \$100
 - B. \$300
 - C. \$350
 - D. \$400

8. On a production possibility frontier (PPF) diagram, technological progress can be shown by a(n)
 - A. movement from a point inside the PPF to a point on the PPF
 - B. movement along the PPF curve
 - C. inward shift of the PPF curve
 - D. outward shift of the PPF curve

9. Consumer surplus is maximised when price is
 - A. at an equilibrium
 - B. set above marginal cost
 - C. set equal to marginal cost
 - D. zero

10. With reference to the production possibility frontier in the diagram below, which option best shows allocative efficiency?
 - A. Point B
 - B. Point E
 - C. Points C and A
 - D. Points A, B and C



- A. Point B
- B. Point E
- C. Points C and A
- D. Points A, B and C

Chapter 6

1.2 Elasticity – Price elasticity of demand (PED)

Task 1 – Key terms

Use the definitions to identify the key terms. *Hint:* answers are in alphabetical order.

Key Term	Definition
	Refers to demand that is backed by both a willingness and an ability to pay a given price to acquire a good or service.
	Refers to how much demand for a good or service changes following a change in a determinant of demand.
	This occurs when the demand for a product is responsive to changes in price, mainly due to the availability of substitute products on the market.
	This occurs when a price change leads to a relatively smaller percentage change in the demand for the product in question.
	Theoretically, this occurs when a certain price change leads to the same percentage change in quantity demanded.

Task 2 – Explain...

- a. How the value of price elasticity of demand is calculated, and what the values mean.

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- b. Using an appropriate diagram, the demand for a product with a good with a $PED > 1$.

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- c. Two reasons why the demand for rice is price inelastic in China.

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d. Explain why the value of PED for many primary commodities (raw materials) such as crude oil and iron ore is relatively low.

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e. Explain why the value of PED for manufactured products such as motor vehicles and is relatively high.

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Task 3 – True or False? 👍 📝

	True / False
a. A firm that faces price inelastic demand should raise prices in order to earn more revenue.	
b. On a normal demand curve, the value of PED increases as the price level rises.	
c. Business class air travel is likely to be highly price elastic due to the high prices.	
d. The larger the proportion of consumers' income spent on a product, the more price elastic demand tends to be.	
e. The PED on a linear demand curve remains constant at all price levels.	
f. If a 10% rise in the price of bread means that the total expenditure on bread also increases by 10%, the PED for bread is perfectly inelastic.	
g. If the value of PED for a product is 1.3, ignoring the minus coefficient, then demand is said to be price elastic.	
h. PED measures the degree of responsiveness of quantity demanded due to a change in price along a given demand curve.	
i. For any given linear demand curve, the steeper the line at a given point the less price elastic is the demand.	
j. If the original demand for a book is given by the linear function $Q_d = 800 - 80P$ and the new demand function is $Q_d = 900 - 60P$ then the PED has fallen. (HL Only)	

Task 4 – Calculating Elasticity of Demand

a. The price of a watch falls from \$300 to \$250, resulting in an increase in demand from 85 units to 95 units per month. Calculate the value of PED and comment on the result.

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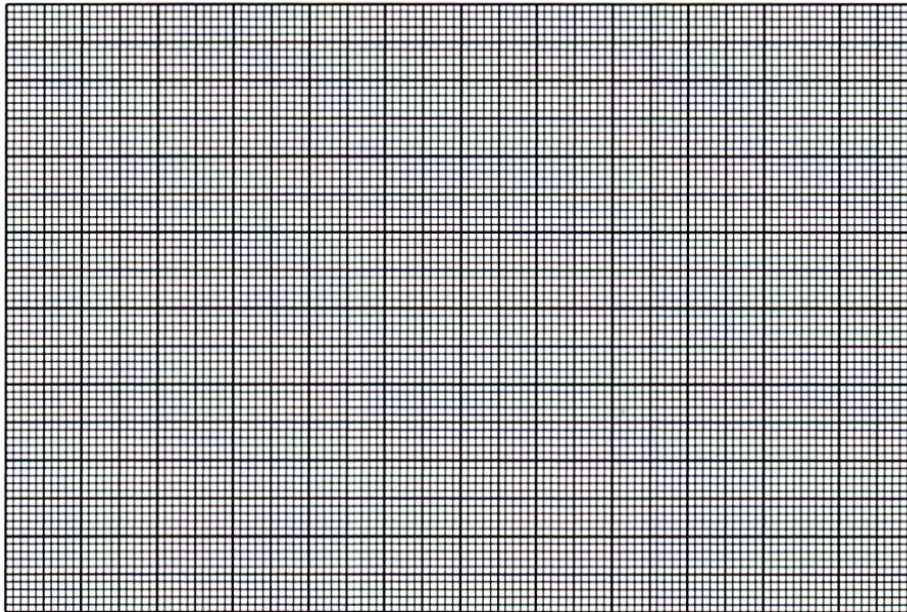
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b. Explain what is wrong (i.e. not strictly correct) with each of the following statements:

i. *"The price is sensitive to changes in demand..."*

ii. *"Price elastic means as price goes up, so demand falls"*

c. Using graph paper, plot the following demand functions to determine which one is relatively more price inelastic:



$$Qd1 = 500 - 5P$$

$$Qd2 = 600 - 4P$$

$$Qd3 = 600 - 3P$$

ii. What does this tell you about the value of the 'slope of the demand function', i.e. $-b$ (the coefficient of P)?

d. Why the value of PED varies along a linear demand curve

e. Suppose that a large music retailer facing the following weekly demand function for its CD music albums:

$$Q_d = 600 - 30P.$$

i. At what price level would there be no demand for CD music albums?

ii. How many CD albums are demanded each week at a price of \$10?

iii. Suppose that music downloads on the internet reduce the demand by 150 units per week at all price levels. What is the equation of the new demand function?

f. Suppose that the supermarket reduces the price of its baked beans from \$0.40 to \$0.35 per can and notices that its sales subsequently rise by 20%.

i. What is the value of the price elasticity of demand?

ii. Suppose the sale of the baked beans rose from 100,000 units to 120,000 units per time period. What is the change in the sales revenue of baked beans following the given price change?

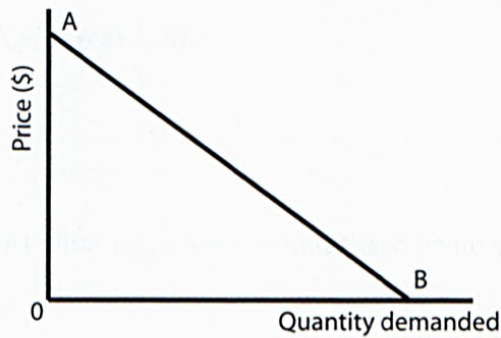
Task 5 – Multiple Choice

1. Saku Jewellers sells a product with a known price elasticity of demand of -0.35. Ceteris paribus, what would happen to the firm's revenues if it increased the price?

- A. Stay roughly the same
- B. Increase insignificantly
- C. Decrease
- D. Increase

2. Which of the following products is most likely to have a very high PED value?
- A. Motor insurance
 - B. Fresh fruit
 - C. Tobacco
 - D. Examination fees
3. The price elasticity of demand for a product will be low if
- A. It operates in a highly competitive market
 - B. There is a large customer base
 - C. There are very few close substitutes
 - D. The price of its complementary good falls
4. Which of the following is not a key determinant of the value of PED?
- A. Habits and tastes
 - B. The time frame under consideration
 - C. The degree of brand loyalty
 - D. The price of products in joint demand
5. Which of the following products is likely to have the lowest PED value?
- A. IB textbooks
 - B. Sports cars
 - C. Games consoles
 - D. Fresh fruit
6. Suppose the price elasticity of demand for a product is known to be equal to 1. What would happen to sales revenue of the product following a 5% rise in the price?
- A. Increases by 5%
 - B. Fall by 5%
 - C. Remains constant
 - D. Change by 1%
7. What is the value of price elasticity of demand if a 10% increase in price causes demand to drop from 1,200 units to 1,000 units per week?
- A. 0.5
 - B. 1.2
 - C. 1.67
 - D. 2.0
8. During the final hour of a school fair at the second-hand book store, price is reduced from \$3 to \$1 and sales rise from an average of 25 books to 34 books per hour. What is the value of PED?
- A. 0.54
 - B. 0.80
 - C. 1.25
 - D. 1.86

9. Which of the statements below applies to the shown demand curve?



- A. PED = 1 along the demand curve
 - B. PED is constant along the demand curve
 - C. PED falls as demand moves from A to B
 - D. PED rises as demand moves from A to B
10. If after a price reduction, it is observed that there is a greater quantity bought but a decline in the total spending on the product, then PED is said to be
- A. Price inelastic
 - B. Price elastic
 - C. Perfectly elastic
 - D. Perfectly inelastic
11. In calculating percentage change in the price for a product priced at \$40, a 25% price reduction is found by
- A. $\$40 - 0.25 \times \40
 - B. $\$40 - (0.75 \times \$40)$
 - C. $\$40 - (0.25 \times \$40)$
 - D. $\$40 - (0.75 \times \$40)$

Questions 12 - 14 refer to a supermarket chain's sales of its own label brand of canned baked beans.

12. Suppose that the supermarket reduces the price of its baked beans from \$0.40 to \$0.35 per can and notices that its sales subsequently rise by 20%. What is the value of the price elasticity of demand?
- A. -0.62
 - B. -0.71
 - C. -1.4
 - D. -1.6
13. From the above calculation, the price elasticity of demand for the supermarket's baked beans is shown to be
- A. Price inelastic
 - B. Price elastic
 - C. Perfectly inelastic
 - D. Perfectly elastic

14. Suppose the sale of the baked beans rose from 100,000 units to 120,000 units per time period.^{*} What is the change in the sales revenue of baked beans following the given price change?
- A. \$2,000
 - B. \$4,000
 - C. \$4,200
 - D. \$13,000
15. Which of the following products is most likely to have the highest price elasticity of demand?
- A. Cigarettes
 - B. Schooling
 - C. Pizza
 - D. Textbooks
16. A firm sells a product with a known PED value of -0.73. What is the impact on sales revenues if the firm decides to increase its price?
- A. Fall by 73%
 - B. Increase by 73%
 - C. Increase
 - D. Decrease
17. If a firm doubles its price from \$200 and notices that demand falls from 400 units per week to 350 units per week, then the change in total revenue will be
- A. \$60,000
 - B. \$80,000
 - C. \$90,000
 - D. \$140,000
18. Fluke Publishers reduces the price of its management books from \$60 to \$50. Sales before the price change averaged 2,000 books per week. The price elasticity of demand for management books is known to be -1.3. What is the new level of sales turnover?
- A. \$2,433.33
 - B. \$100,000
 - C. \$121,666.67
 - D. \$130,000
19. The price elasticity of demand for a product will be lower if
- A. There are only a few close complementary goods
 - B. There are very few close substitute products
 - C. The price is relatively high
 - D. The product is bought and sold in mass consumer markets

20. Alison & Marshall Foods Ltd increases the price of its fruit baskets from \$5 to \$6. As a result, it sees a drop in demand from 100 to 90 fruit baskets a week. What is the value of the price elasticity of demand for the product? (HL Only)
- A. 2.0
 - B. 1.5
 - C. 0.5
 - D. 1.0
21. A firm sells a product with a known Price Elasticity of Demand of -0.75. What would happen to the firm's revenues if it reduced the price?
- A. Stay roughly the same
 - B. Increase insignificantly
 - C. Decrease
 - D. Increase
22. Which factor below is not likely to allow a firm to set its prices significantly higher than its rivals?
- A. It has a unique selling point
 - B. Its reputation or image gives it a low price elasticity of demand
 - C. It sells an exclusive and differentiated product
 - D. Price elasticity of demand for the product is high
23. Which of the following products is likely to have the highest value of price elasticity of demand?
- A. Petrol
 - B. Bananas
 - C. Alcohol
 - D. Driving test fee
24. The the proportion of consumers' income spent on a product, the moreinelastic demand will tend to be.
- A. Lower, income
 - B. Higher, income
 - C. Smaller, price
 - D. Larger, price
25. Which demand function below has the highest value of price elasticity of demand? (HL only)
- A. $Q_d = 400 - 4P$
 - B. $Q_d = 600 - 4P$
 - C. $Q_d = 400 - 5P$
 - D. $Q_d = 600 - 5P$

Chapter 7

Elasticity – Cross price elasticity of demand (CED)

Task 1 – Key terms

Use the definitions to identify the key terms. *Hint:* answers are in alphabetical order.

Key Term	Definition
	These related goods are jointly demanded so have a negative cross price elasticity of demand.
	This measures the sensitivity of demand for one product following a change in the price of a related product.
	These products can be used as alternative products so an increase in the price of one leads to a rise in the demand for the other.
	Products that have a cross price elasticity of zero because the change in the price of one product does not directly affect the demand for the other.

Task 2 – True or False?

	True / False
a. Strong complementary goods are likely to have a negative cross price elasticity of demand.	
b. Strong substitute products have a high negative CED value.	
c. Close substitutes have a positive value of less than one.	
d. The stronger the relationship between two complementary goods, the higher is the co-efficient of the cross price elasticity of demand.	
e. If tea is a substitute for coffee, ceteris paribus, an increase in the price of tea will lead to a rightwards shift in the demand for coffee.	
f. If two products have a CED value of +2.5 then this means that they are strong complementary goods.	
g. If popcorn has a CED value of -0.9 with respect to the price of cinema tickets, a 10% rise in the price of cinema tickets causes a 9% fall in demand for popcorn.	

Task 3 – Explain why...

- a. Knowledge of CED can be useful for rival firms selling substitute products.
-
-

b. Knowledge of CED can be useful for firms selling complementary goods.

c. The cross price elasticity of demand between private and public transport is likely to be a low positive value.

Task 4 – Calculating cross price elasticity of demand

a. What is the value of CED if the demand for margarine falls by 10% following a fall in the price of butter by 8%?

b. The price of coffee increases from \$4.50 to \$4.95 per jar and it is observed in the subsequent time period that the quantity demanded for tea rises from 200 boxes to 225 boxes per week. Calculate the CED and comment on your findings.

c. Costs of production have increased causing the average price of shampoo to rise from \$3.5 to \$3.85. As a result, the demand for conditioner falls from 9 million units per year to 7.92 million per year. Calculate the CED and comment on your findings.

Task 5 – Multiple Choice

1. If the cross price elasticity of demand (CED) for two products is valued at +1.8, this means that the products are

- A. Strong complementary products
- B. Strong substitute products
- C. Weak complementary products
- D. Weak substitute products

2. What is the value of the CED for two products that are perfect substitutes?

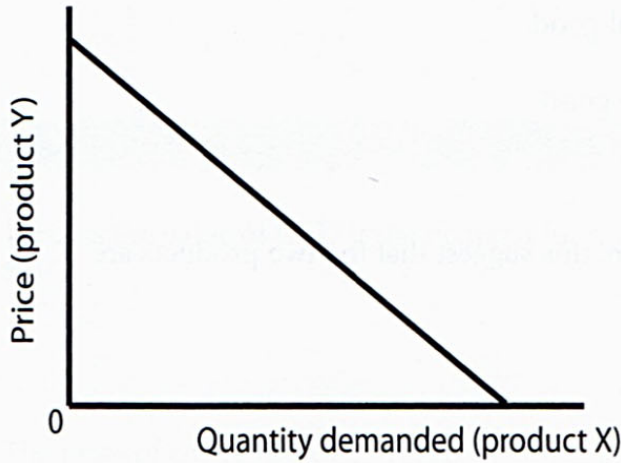
- A. Zero
- B. +1
- C. Infinity
- D. -1

3. If the cross price elasticity of demand for two products is -0.6 , this means that the products are
- Strong complementary products
 - Strong substitute products
 - Weak complementary products
 - Weak substitute products
4. Which of the following is most likely to reduce the demand for normal good?
- An increase in costs of producing the normal good
 - An increase in the price of a substitute good
 - An increase in the price of a complementary good
 - An increase in personal income levels
5. If products alpha and beta have an CED value of zero, this suggest that the two products are
- Substitute goods
 - Complementary goods
 - Unrelated goods
 - Normal goods
6. The value of cross price elasticity of demand for perfect substitutes is
- -1
 - $+1$
 - Zero
 - Infinity
7. For any given good or service, cross price elasticity of demand does not measure the effect of a change on the demand for
- That product
 - Complementary products
 - Substitute products
 - Unrelated products
8. An increase in the price of a good will result in a in the for its complementary good, other things remaining constant.
- Fall, demand
 - Fall, price
 - Rise, demand
 - Rise, price
9. If products x and y have a cross price elasticity of demand value of $+1.1$, this means that the products are
- Strong substitutes
 - Strong complements
 - Weak substitutes
 - Weak complements

10. Which of the products below has the closest relationship with product x, given the value of their CED?

- A. -1.0
- B. +1.0
- C. Zero
- D. Infinity

11. The diagram below represents the relationship for products that are considered to be



- A. Complements
- B. Substitutes
- C. Inferior
- D. Superior

12. If an increase in the price of product Y leads to a fall in the demand for product X, then

- A. *X and Y are inferior goods*
- B. X and Y are substitutes
- C. X and Y are complements
- D. X and Y are in competitive demand

13. Assume the CED for Lenovo laptops is +0.9 following a price change for Dell laptops. What is the percentage change in demand for Lenovo laptops if the market price of Dell laptops rises from \$600 to \$660?

- A. Increase by 9%
- B. Fall by 9%
- C. Increase by 11.1%
- D. Fall by 11.1%

14. The table below shows the price changes and its effects on products C and D. What is the value of CED for product C following the price change for product D from \$100 to \$95?

Price of product D (\$ per unit)	Quantity demand of product C (units per day)	Quantity demand of product D (units per day)
\$100	200	80
\$95	250	90

- A. +5.0
 B. +2.5
 C. -2.5
 D. -5.0

15. The table below shows the price change for disposable razors and the demand for shaving cream at a large supermarket outlet. What is the value of the cross price elasticity of demand?

Month	Price of disposable razors (\$)	Demand for shaving cream (units)
June	\$4.0	1,980
July	\$4.5	1,890

- A. 2.77
 B. 2.33
 C. 0.43
 D. 0.36

Chapter 8

1.2 Elasticity – Income elasticity of demand (YED)

Task 1 – Key terms

a. Use the definitions to identify the key terms. *Hint: answers are in alphabetical order.*

Key Term	Definition
	A change in income level leads to a proportionally smaller change in the demand for a product.
	The demand for these products falls as consumer income levels rise, i.e. these products have a negative income elasticity of demand.
	Also known as superior goods, these products have a $YED > 1$, i.e. the demand for such products is highly income elastic.
	The demand for these products has a positive income elasticity of demand, i.e. an increase in consumer income levels tends to lead to an increase in demand.

b. Classify the following products into either normal goods (necessities or luxuries) or inferior goods, based on the concept of Income Elasticity of Demand (YED), by placing a tick (ü) in the appropriate boxes.

	Normal	Inferior		Normal	Inferior
Fresh flowers			Tablet computers		
Haircuts			Public transport		
Microwave lunch meals			Staple foods		
No-frills labelled products			Textbooks		
Single-ply tissue paper			Canned fruits and vegetables		

Task 2 – Explain why...

a. This statement about income elasticity of demand is inaccurate: *“Demand must be income elastic because as the price dropped, demand rose...”*

.....

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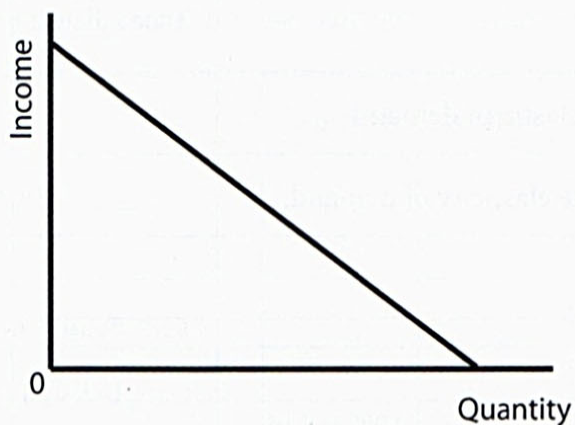
- b. The demand for public transport might be classed as an inferior product in developed nations.
- c. It might be difficult to classify economy class airline travel as either an inferior good or as a normal good.
- d. The income elasticity of demand for a normal good is greater than zero, i.e. YED is positive.
- e. It is vital to consider the positive or negative sign when looking at the value of YED.
- f. The demand for rice will rise by 5% following a 10% increase in average incomes if the YED is +0.5

Task 3 – True or False?

	True / False
a. Business class air travel is likely to be highly income elastic in demand.	
b. Laptop computers are likely to have a negative income elasticity of demand.	
c. Giffen goods are a type of inferior good.	
d. The value of YED for necessities is between 0 and 1.	
e. If the income elasticity of demand for fresh flowers is +2.1, then a 10% fall in consumer incomes will lead to a 21% fall in the demand for fresh flowers.	
f. Demand for sunglasses is likely to have a negative income elasticity of demand.	
g. When the demand for a product is income elastic, a change in consumer income levels leads to a greater percentage change in quantity demanded.	
h. Luxury goods and services are the most affected products during a downturn in the economy, i.e. when GDP declines.	
i. Inferior goods are those that have not met minimum quality standards, perhaps due to a lack of proper staff training.	
j. All inferior goods have a negative YED value.	

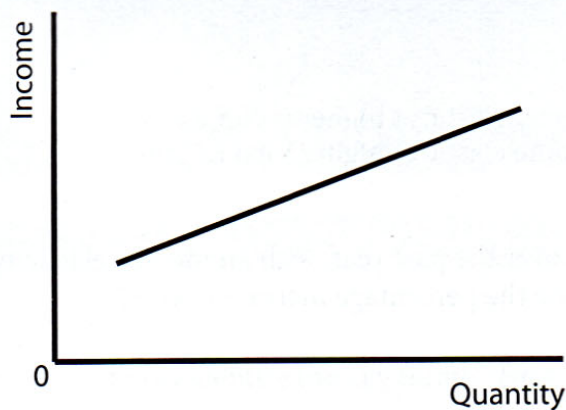
Task 4 – Multiple Choice

1. If a product has an income elasticity of demand (YED) that is less than 1.0, then the demand for the product is said to be income
 - A. Inelastic
 - B. Elastic
 - C. Resilient
 - D. Responsive
2. The income elasticity of demand for four products is shown below. Which product is most likely to be a luxury good?
 - A. -1.3
 - B. +1.3
 - C. -0.6
 - D. +0.6
3. Which product would have the lowest YED value?
 - A. School uniform
 - B. Original Picasso paintings
 - C. Diamonds
 - D. Mobile phones
4. What does the demand curve below suggest about the product?



- A. It is a normal good
- B. It is a superior good
- C. It is a luxury product
- D. It is an inferior good

5. What does this demand curve suggest about product y?



- A. It is a normal good
- B. It is a necessity
- C. It is a luxury product
- D. It is an inferior good

6. Which of the following statements best defines inelastic YED, following a change in consumer income levels?

- A. A proportional change in the quantity demanded
- B. A smaller percentage change in the quantity demanded
- C. A larger percentage change in the quantity demanded
- D. A negative change in the quantity demanded

7. Products with an income elasticity of demand of between 0 and +1.0 are

- A. Luxuries
- B. Necessities
- C. Branded
- D. Inferior

8. Which type of product is most likely to be affected by an economic downturn?

- A. Luxuries
- B. Necessities
- C. Branded
- D. Inferior

9. If the income elasticity of demand for sausages in a particular country is -0.2, then a 5 per cent increase in consumer incomes will, all other things remaining constant, lead to a

- A. 1 per cent decrease in demand for sausages
- B. 2.5 per cent decrease in demand for sausages
- C. 10 per cent decrease in demand for sausages
- D. 25 per cent decrease in demand for sausages

10. If the YED for supermarket own-label wines is -0.7, then a 5% drop in average incomes should do what to the sales of the product?

- A. 3.5% fall in demand
- B. 3.5% rise in demand
- C. 7.14% fall in demand
- D. 7.14% rise in demand

11. Luxury items such as expensive jewellery are likely to have a YED value that is
- A. Income elastic at all income levels
 - B. Income inelastic at all income levels
 - C. Income elastic at lower income levels and income inelastic at higher income levels
 - D. Income inelastic at lower income levels and income elastic at higher income levels
12. In a country with an increase in average incomes of 5% over the past year, with an income elasticity of demand of 2.5 in the private housing market, what will be the percentage increase in sales?
- A. 0.5%
 - B. 2.0%
 - C. 2.5%
 - D. 12.5%
13. Which of the following products is likely to have the most income inelastic demand?
- A. Domestic holidays
 - B. Staple foods
 - C. Personal computers
 - D. Textbooks
14. Which of the following is most likely to represent the income elasticity of demand for bespoke (custom-made) suits?
- A. -3.3
 - B. -1.0
 - C. +1.0
 - D. +3.3
15. Inferior goods have a income elasticity of demand, meaning that demand for inferior goodswhen income levels rise.
- A. negative, falls
 - B. negative, rises
 - C. positive, rises
 - D. positive, falls

Chapter 9

1.2 Elasticity – Price Elasticity of Supply (PES)

Task 1 – Key terms

Use the definitions to identify the key terms. *Hint:* the answers all begin with the letter 'P'.

Key Term	Definition
	This theoretical situation occurs when $PES = \text{infinity}$, meaning that firms can supply any amount at the given price level due to constant unit costs of production and no limits on its productive capacity.
	This supply situation occurs when the $PES > 1$, i.e. a change in price leads to a greater percentage change in quantity supplied.
	Refers to how much supply of a good or service changes following a change in the price.
	This situation occurs when supply is relatively fixed in the short run, so firms cannot easily increase supply following a rise in price, i.e. the value of $PES < 1$.

Task 2 – True or False?

	True / False
a. Price elasticity of supply measures the degree of responsiveness of supply due to small changes in price.	
b. When the price elasticity of supply is greater than 1.0, supply is said to be price elastic.	
c. Price inelastic supply means that firms find it difficult to react swiftly to changes in price.	
d. An original Picasso or Van Gogh painting is likely to have perfect elastic supply.	
e. When $PES = \text{infinity}$, supply is said to be perfectly elastic following a change in demand.	
f. The output of agricultural products tends to take a relatively long time so supply is fixed in the short run.	
g. The supply of most products tends to be relatively price elastic during a recession due to spare capacity.	
h. Businesses with high inventories (stocks of raw materials, work-in-progress and finished goods) tend to have relatively price elastic supply.	
i. The value of PES is always positive.	
j. Diagrammatically, a price elastic supply curve will intercept the <i>x-axis</i> rather than the <i>y-axis</i> .	

Task 3 – Explain why...

a. The production process time affects the price elasticity of supply for a product.

b. Price elasticity of supply of labour is a key factor in determining wage differentials.

c. Barriers to entry, such as high set-up costs and the existence of copyrights and patents, reduce the elasticity of supply in an industry.

Task 4 – Calculating Elasticity of Supply

a. The price of luxury watches at Hagan Corp falls from \$300 to \$250, resulting in supply falling from 95 units to 85 units per month. Calculate the value of PES and comment on the result.

b. Explain what is wrong (i.e. not strictly correct) with each of the following statements:

i. *“The price is sensitive to changes in supply...”*

ii. *“Price elastic supply means as price goes up, supply rises.”*

iii. *“As prices have risen by 10% it has caused supply to contract by only 15%, i.e. supply is inelastic.”*

c. Assume that the price for school canteen meals is \$5 and the daily quantity supplied is 600 meals. With a PES of 1.3, calculate how a fall in price to \$4 per meal will, in theory, affect the quantity supplied.

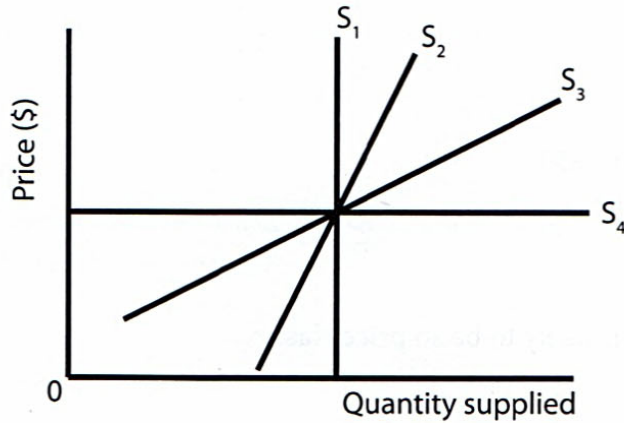
- d. Suppose the output of a computer accessory is given by the supply function $Q_s = -140 + 3.5P$. Calculate the following:
- The minimum price required by the firm to supply the magazines
.....
.....
 - The price elasticity of supply if price increases from \$50 to \$54
.....
.....
 - The price elasticity of supply if price falls from \$60 to \$50
.....
.....
 - Explain why the PES of the computer components is likely to be so price elastic.
.....
.....

Task 5 – Multiple Choice

- Pitarch Jewellers produces a product with a known price elasticity of supply of +1.2. Ceteris paribus, what would happen to the firm's output if the market price increased?
 - Increase insignificantly
 - Decrease insignificantly
 - Increase significantly
 - Decrease significantly
- The price elasticity of supply for a product will be low if
 - It operates in a highly competitive market
 - There is a large customer base
 - There are long time lags in the production process
 - The price of its complementary good falls
- Which of the following products is likely to have the lowest PES value?
 - Textbooks
 - Bottled water
 - Games consoles
 - Fresh fruit
- Which supply condition suggests that firms can react quickly to changes in price?
 - Price inelastic supply
 - Price elastic supply
 - Perfectly inelastic supply
 - Unitary elastic supply

5. Which of the following is not a key determinant of the value of price elasticity of supply?
- A. Production time
 - B. Production technologies
 - C. Costs of production
 - D. The number of direct rivals
 - E.

6. Which of the following supply curves represents the long run PES situation for a product?



- A. S₁
 - B. S₂
 - C. S₃
 - D. S₄
7. A supply curve of unitary price elasticity is shown as a
- A. Vertical line
 - B. Horizontal line
 - C. Upwards sloping line intersecting the price axis
 - D. Any straight line drawn through the origin
8. If a 15% increase in average food price creates a 10% rise in output, the value of price elasticity of supply would equal
- A. +0.67
 - B. +1.5
 - C. +5.0
 - D. -5.0
9. Which of the following is most likely to have the lowest price elasticity of supply?
- A. Fresh flowers
 - B. Boeing aircraft
 - C. Textbooks
 - D. Batteries
10. The price elasticity of supply for a product will be lower if there is a
- A. Small number of close complements
 - B. Large number of close substitutes
 - C. Long time lag in the production process
 - D. High degree of capital intensity in the production process

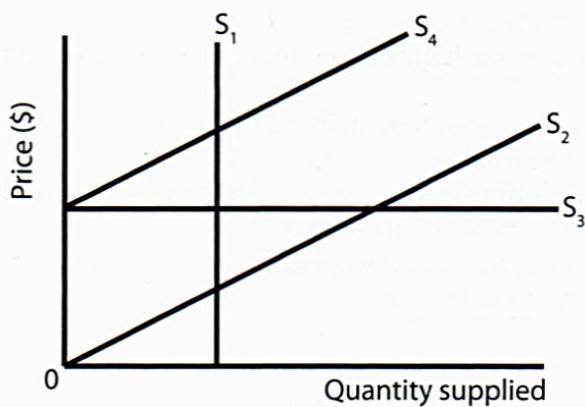
11. Factors determining the value of price elasticity of supply do not include

- A. Spare production capacity
- B. Stocks of raw materials, components and finished goods
- C. Ease and cost of factor substitution
- D. The degree of necessity of the product being supplied

12. Which of the following products is likely to be the most price elastic in supply?

- A. Coca-Cola soft drinks
- B. Petrol
- C. Toyota hybrid vehicles
- D. Pharmaceuticals

13. Which of the supply curves below has a PES value of zero?



- A. S₁
- B. S₂
- C. S₃
- D. S₄

14. Which of the supply functions below is the least responsive to changes in price? (*HL only*)

- A. $-800 + 20P$
- B. $-600 + 30P$
- C. $400 + 40P$
- D. $500 + 20P$

15. Which of the supply functions is the most price inelastic? (*HL only*)

- A. $100 + 10P$
- B. $-100 + 4P$
- C. $120 + 6P$
- D. $-60 + 4P$

Chapter 10

1.3 Government intervention – Taxes and subsidies

Task 1 – Complete the missing words...

In some cases, the government will intervene if the price mechanism fails to establish the price at the 'correct' level – from society's point of view. For example, if the price of agricultural products is deemed to be too low thereby creating few incentives for farmers, the government might impose a price (also known as a price) meaning firms cannot sell below this price. In such a case, excess is likely to occur, with the government buying up the excess. When agricultural output is low, perhaps due to adverse weather conditions, the government can release the surplus from its, thereby helping to stabilise food prices. For it to be effective, the minimum price must be set the equilibrium price. Another example would be a national minimum wage in the labour market which governs the wage rate that can be paid to employees per hour.

By contrast, a price is a government-imposed limit on the maximum price that can be charged for a product. To be effective, the upper limit is imposed the equilibrium price (known as a binding price ceiling) to protect the interest of consumers from conditions such as soaring rents on residential property or escalating food prices. However, free market economists argue that price ceilings can represent government failure if the underlying problem is a lack of in the market (which would bring down prices naturally).

A is a financial assistance to a business or industry from the government to encourage output. It might be used to encourage the sale of exports, to reduce of certain goods and services (such as education, training and healthcare), to keep down the of living (such as food prices and housing), or as a form of (trade barrier) against foreign competition.

By contrast, (levies imposed by the government) raise the costs of production, thereby limiting the output of certain goods and services. They may be imposed for several reasons, such as limiting the output of goods (such as alcohol and tobacco), to correct market (such as fuel taxes on motorists), to affect the level of aggregate demand (by changing income tax, for example) or to protect domestic businesses from overseas rivals (via the imposition of on imports).

Task 2 – Key Terms

Identify the key terms from the given clues. *Hint:* answers appear in alphabetical order.

	A category of tax levied as a percentage of the value of property or products (goods and services). Examples include property taxes, tariffs (imposed on imported products) and sales taxes (paid by consumers at the point of sale).
	Refers to the difference between what price consumers are willing and able to pay for the purchase of a product, and the price they actually pay; as shown by the area under the demand curve above the market price.
	Also known as excise duty, this type of tax is imposed on expenditure rather than on income. Examples include GST (goods and services tax) and duties on petrol and cigarettes.
	Also known as a price ceiling, the price is set (by the government) below the market equilibrium price to encourage consumption.
	Also known as a minimum price, the imposition of this above the market price guarantees provision of the good or service by encouraging supply.
	Refers to the difference between the price that producers are willing and able to supply at and the price they actually receive; as shown by the area above the supply curve below the market price.
	Also known as a per unit tax, this type of the tax imposes a fixed amount of duty on each product, such as \$1 per packet of cigarettes or \$50 per air passenger ticket.
	This refers to finance assistance from the government in order to reduce the costs of production of firms. This creates an incentive for producers to increase the supply of certain products, such as education or health care.
	These are government levies used to affect the allocation and consumption of resources. They can be classified as direct, indirect, specific and ad valorem.

Task 3 – True or False? 👍 📌

	True / False
a. A minimum price imposed above the market clearing price creates a situation of excess supply.	
b. Consumers will benefit most from an increase in government subsidies if demand is price inelastic.	
c. Price floors do not exist in unregulated market economies.	
d. Excess supply exists when a price floor is set above the market equilibrium price.	
e. Producers, rather than consumers, benefit from price ceilings.	
f. Consumers pay a higher price if a price floor is imposed.	
g. The imposition of a specific indirect tax will cause a parallel shift of the supply curve to the left.	

h.	If the price elasticity of supply is low, consumers will pay a smaller proportion of the tax with a larger incidence on producers. <i>(HL only)</i>	
i.	A greater proportion of the incidence of tax falls on producers if the demand for the product is price inelastic. <i>(HL only)</i>	
j.	When demand is price elastic, the producer is able to pass on most if not all of an indirect tax to the consumer by increasing the price. <i>(HL only)</i>	

Task 4 – Explain...

a. Why the price in the unofficial (parallel) market for a product is higher than the free market price if a price ceiling is imposed on that product.

b. Why there is excess demand if the price in a market is fixed, by the government, below the equilibrium.

c. Three reasons why governments impose indirect taxes.

d. Why governments might impose a minimum wage (price floor) in the labour market.

e. Why governments might use food price controls with the use of price ceilings.

Task 5 – Calculations

a. This questions refer to the following demand and supply functions for a product:

- $Q_d = 10 - 4P$
- $Q_s = 4 + 2P$

i. Calculate the equilibrium price and quantity traded.

- ii. Calculate the excess supply if a price floor of \$2 is imposed by the government
-
-
- iii. Calculate the value of the new price following a \$2 per unit tax on the product (*Hint: work out the linear equation for the new supply curve after the imposition of the specific tax*).
-
-

Task 6 – Multiple Choice

1. Which of the following is not a function of taxation?
 - A. To redistribute income and wealth
 - B. To reduce the consumption of certain goods and services
 - C. To raise government revenue
 - D. To encourage the output of products deemed beneficial to society

2. In a free market economy (without government intervention) an increase in supply of agricultural output reduces the earnings of farmers because
 - A. The government purchases any excess output
 - B. Supply of agricultural products is price elastic
 - C. Demand for agricultural products is price inelastic
 - D. Agricultural output must be sold at a predetermined price floor

3. The imposition of a per unit tax on cigarettes will cause
 - A. The demand curve to shift to the left
 - B. The supply curve to shift to the left
 - C. An expansion of the demand curve
 - D. A contraction of the supply curve

4. An increase in the rate of income tax will cause
 - A. The demand curve for most products to shift to the left
 - B. The supply curve of most products to shift to the left
 - C. An expansion of the demand curve for most products
 - D. A contraction of the supply curve for most products

5. If the government imposes a minimum price for a product set above the equilibrium price, it will
 - A. Reduce equilibrium price
 - B. Cause excess of demand
 - C. Create unemployment
 - D. Create incentives to supply

6. What is the effect of fixing the maximum price for a product below its equilibrium price?
 - A. A higher price charged to customers due to the maximum price
 - B. Excess demand for the product
 - C. An increase in producer surplus
 - D. Increased supply due to the maximum price

7. What is the effect of fixing the minimum price for a product above its equilibrium price?
 - A. A surplus in the output of the product
 - B. A shortage in the market for the product
 - C. Excess demand for the product
 - D. Higher profits for the supplier of the product

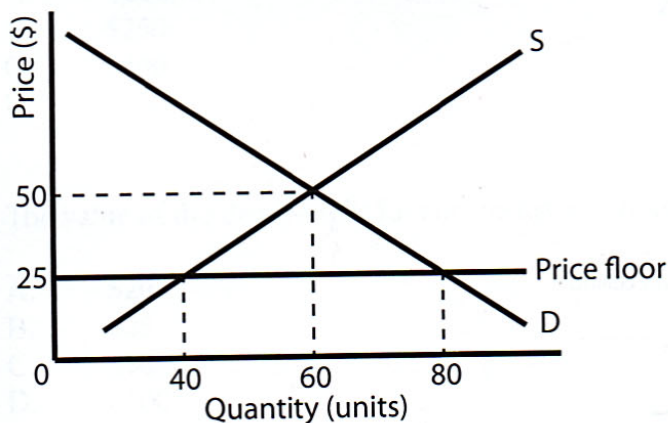
8. A valid reason for the government setting a price ceiling below the equilibrium position is to
 - A. Encourage the purchase of electric cars to improve the environment
 - B. Control climate change
 - C. Prevent pollution in the domestic economy
 - D. Ensure that domestic producers have a competitive advantage

9. Which of the following is not a consequence of the imposition of a price ceiling?
 - A. Shortages
 - B. Inefficient resource allocation
 - C. Underground parallel markets
 - D. Unstable prices

10. Which of the following will be reduced following the imposition of a price ceiling on a product?
 - A. Producer surplus
 - B. Consumer surplus
 - C. Deadweight loss
 - D. Excess demand

11. Which of the following is not an ad valorem tax?
 - A. Goods and Services Tax (GST)
 - B. Value Added Tax (VAT)
 - C. Progressive income tax
 - D. Stamp duty on commercial property

12. The diagram below shows the imposition of a price floor. What can be deduced from the diagram?

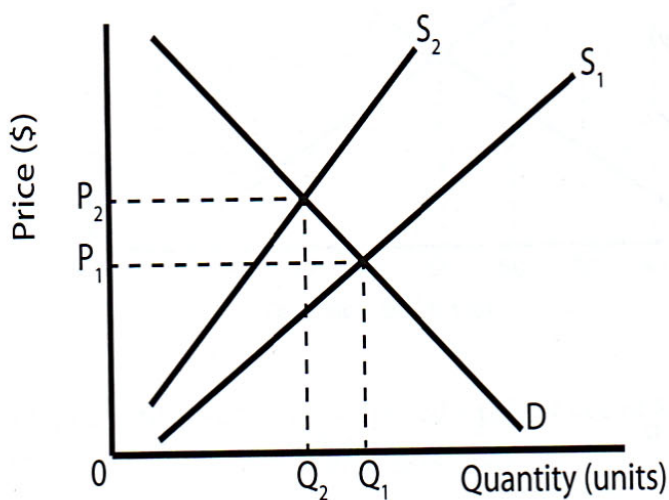


- A. It is ineffective
- B. There is excess supply of 40 units
- C. Producers earn \$2,000 revenue
- D. The selling price is \$50

13. Which statement below applies to the imposition of an effective price floor on a product?

- A. Suppliers are guaranteed a higher price than before
- B. There is a decline in production
- C. There is a shortage in the market
- D. Producer surplus falls

14. The imposition of a tax has caused the following change in supply, as shown in the diagram below. Which type of tax does this represent?

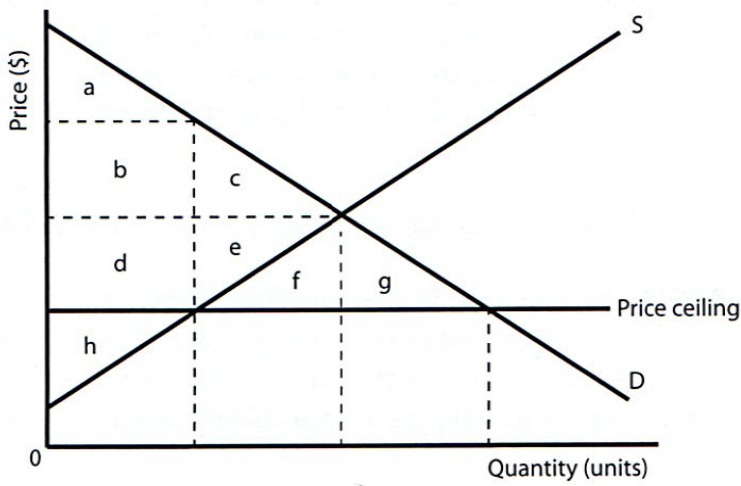


- A. Specific
- B. Ad valorem
- C. Indirect
- D. Direct

15. Which of the following is not a reason for granting subsidies to producers?

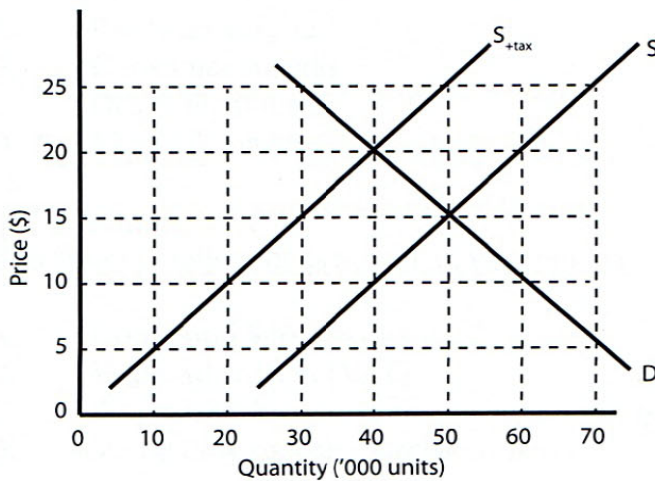
- A. To limit production externalities such as pollution
- B. To encourage the output of merit goods
- C. To prevent unemployment and a decline in the industry
- D. To limit the consumption of demerit goods

Questions 16 – 17 refer to the diagram below. (HL only)



16. What is the value of consumer surplus after the imposition of a price ceiling? (HL Only)
- A. a, b, c
 B. a, b, c, d, e
 C. a, b, c, d, f, h
 D. a, b, c, d, e, f, g
17. What is the value of the producer surplus after the imposition of a price ceiling? (HL Only)
- A. h
 B. f, g
 C. d, e, f
 D. d, e, f, g

Questions 18 – 20 refer to the diagram below. (HL Only)



18. The total amount of tax collected by the government is (HL only)
- A. \$400
 B. \$500
 C. \$750
 D. \$800

19. The incidence of tax paid by the producer is (*HL only*)

- A. \$200
- B. \$250
- C. \$400
- D. \$500

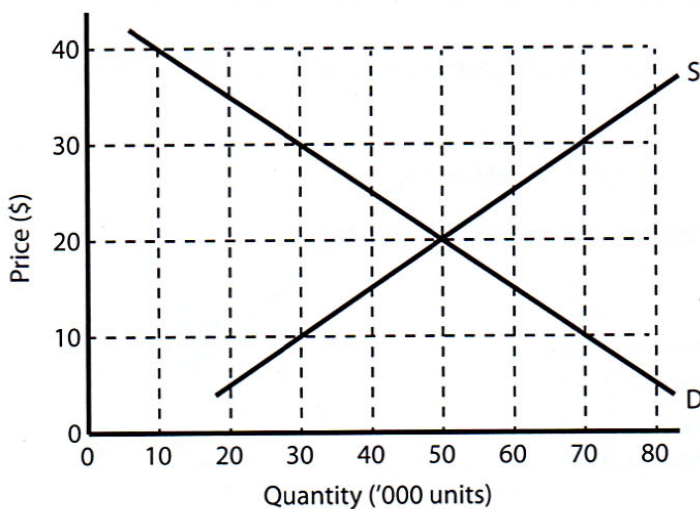
20. The value of the deadweight loss of the tax is (*HL only*)

- A. \$20
- B. \$25
- C. \$50
- D. \$100

21. The incidence of tax paid by consumers will be higher than that paid by producers if (*HL only*)

- A. Demand is price elastic
- B. Supply is price elastic
- C. Demand is price inelastic
- D. Producers have spare productive capacity

Questions 22 – 23 refer to the diagram below (*HL only*)



22. Suppose the government imposed a price floor of \$30 for a product, as illustrated in the diagram above. What situation arises? (*HL only*)

- A. Excess demand of 40,000 units
- B. Excess supply of 40,000 units
- C. Excess demand of 20,000 units
- D. Excess supply of 20,000 units

23. Suppose the government were to guarantee suppliers a price of \$30 per unit and that it exported the products overseas for a price of \$20. What is the amount paid by taxpayers to support this scheme? (*HL only*)

- A. \$400,000
- B. \$800,000
- C. \$1,200,000
- D. \$2,100,000

Questions 24 – 25 refer to the following demand and supply functions:

- $Q_d = 10 - 4P$
- $Q_s = 5 + 2P$

24. What price would be necessary to sell 20 units? (*HL only*)

- A. -\$2.5
- B. \$5
- C. \$7.5
- D. \$10

25. What is the new market price if a \$2 per unit tax is imposed on the product? (*HL only*)

- A. \$1.5
- B. \$2.83
- C. \$6.5
- D. \$9.5

Chapter 11

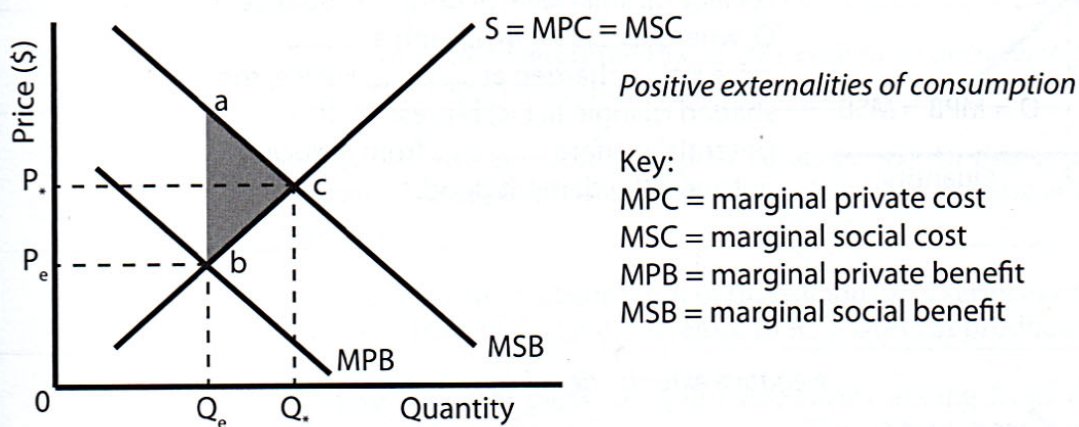
Market failure

Task 1 – Complete the missing words...✍️

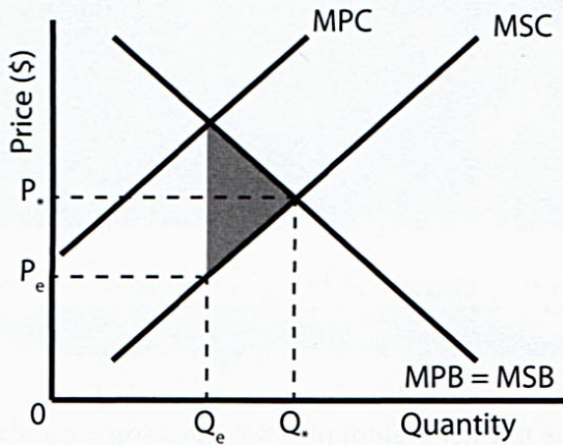
Market failure exists when there is inefficiency, i.e. the market system overprovides some goods and services, whilst underproviding other goods and services. Examples of market failure include the existence of:

- merit goods and public goods (which exert externalities)
- demerit goods (which exert externalities), and
- abuse of monopoly power (and the associated inefficiencies)

..... goods are products that create positive externalities to society and hence their output/consumption means that social benefits are greater than private benefits. Examples include public sports and recreation facilities (such as sports grounds, public swimming pools, museums and libraries).



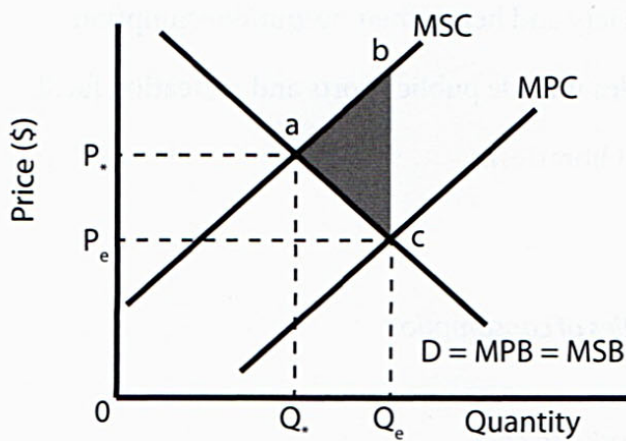
The diagram shows that positive externalities exist since > at all levels of output due to the existence of externalities of consumption. Hence, there is market failure at the free market equilibrium position (Q_e and P_e), with underconsumption of the merit good. With government intervention, the potential welfare gain (the external benefit) to boosting output from Q_e to Q^* is shown by the shaded triangle a,b,c. It therefore also represents the welfare loss in the presence of market failure. Resources are efficiently allocated when =, i.e. at output level (also known as the Pareto optimum level of output). Thus, the most allocatively efficient price is



Positive externalities of production

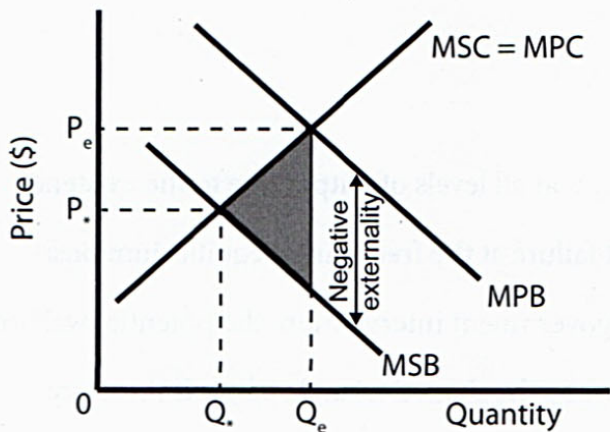
The free-market will fail to supply merit goods at the socially optimum level of output, where $MSC = MSB$. The shaded area represents the **positive** externality, i.e. the welfare loss in the absence of government intervention. Government provision of merit goods means that output rises to Q_s and price falls to P_s .

..... goods are products that create negative externalities to society and hence their output/consumption means that social costs are than private costs. Examples include tobacco, alcohol, hard drugs, junk food, prostitution and gambling. Hence, when negative production externalities exist, the MSC is greater than MPC , as shown in the diagram below.



Negative externalities of production

It can be seen that in a free market, output will be at where = MPB . However, from society's point of view, there is an overproduction of demerit goods. The socially optimal level of output should be at Q_s where = MSB , with a price being charged at Hence, the shaded triangle (a,b,c) represents the potential welfare from reducing output of the demerit good.



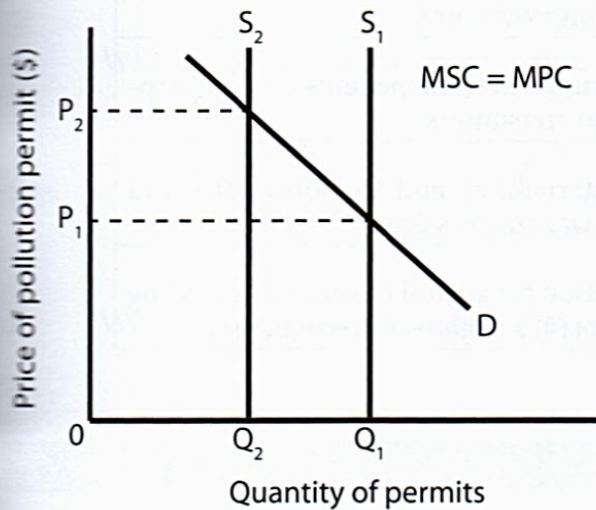
Negative externalities of consumption

It can be seen that in a free market, there would be of the demerit good as Q_e exceeds Q_s , with the negative externality accounting for the divergence between MSB and The socially optimal level of consumption is at Q_s where = MSB . Hence, the shaded triangle represents the welfare of consumption in the absence of government interventions. The government can impose a tax on the demerit good, shifting the MSC curve to the left, possibly raising the price to

In some cases, the government will intervene if the price mechanism fails to allocate resources efficiently. For example, and trade schemes (CATS) place a limit on emissions, per time period, but with flexibility in how

firms comply. Innovative and efficient firms are rewarded by being able to their excess permits to pollute.

Not only do these programmes reduce carbon emissions, they can raise a huge amount of revenue for the government.



Over time, the government may choose to reduce the number of permits, thereby the supply of carbon emissions permits from S_1 to S_2 . This raises the price of pollution permits, creating an incentive for firms to be more efficient and invest in clean technologies. Critics of cap and trade schemes argue that these are anti-competitive (against smaller firms) and they can cause job losses (due to higher costs). Notice that government revenue also from P_1Q_1 to P_2Q_2 due to the relatively price demand for pollution permits.

Task 2 – Key Terms

Identify the key terms from the given clues. *Hint:* answers appear in alphabetical order.

	A category of tax levied as a percentage of the value of property or products (goods and services). Examples include property taxes, tariffs (imposed on imported products) and sales taxes (paid by consumers at the point of sale).
	Government programme that allows emissions permits to be traded in a market-based approach, used to create incentives to develop clean technologies.
	Also known as a common-pool resource (CPR), this common property resource is available to the public but suffers from overuse and therefore sustainability.
	The output and consumption of these goods and services create negative externalities (external costs), therefore $MSC > MPC$ of production.
	These are third party, or spill-over, effects arising from the production and consumption of goods and services. These effects represent the failure of the market to achieve a social optimum, where $MSC = MSB$.
	Refers to the extra value enjoyed by private individuals and firms from the consumption or production of an extra unit of a good or service.
	The incremental charges paid by private individuals and firms from the consumption or production of an extra unit of a good or service.
	The incremental benefits of an economic transaction from society's point of view, i.e. the sum of marginal private costs and marginal external costs.
	The extra costs of an economic transaction from society's point of view, i.e. the sum of marginal private benefits and marginal external benefits.
	The provision and consumption of these goods create a divergence between private and social benefits, leading to the risk of market failure.

	This spillover effect occurs when the total cost of producing (or consuming) a good or service exceeds the costs (price) borne by the producer (consumer).
	The establishment of markets for trading rights to pollute, which have the benefits of creating incentives not to pollute <i>and</i> generating revenue which could be used for environmental protection and improvement.
	This is a beneficial spillover effect that occurs when the benefits of consumption to society exceed the private benefits to consumers.
	These goods and services exert positive externalities, and are non-rivalry and non-excludable in nature, such as weather warning systems.
	This refers to the sum of all costs of production for a good or service, including external (third party) costs, i.e. private costs plus negative externalities.

Task 3 – True or False? 📌 📌

	True / False
a. A minimum price imposed above the market clearing price creates a situation of excess supply.	
b. Both the state (public) and private sector of the economy provide merit goods.	
c. It is possible that the use of private transport can create both positive and negative externalities.	
d. Market failure can arise from an over-allocation or an under-allocation of goods and services.	
e. A public good is made available to everyone, even those who cannot afford to pay for the good or service.	
f. The existence of a free-rider problem means that the market (total) demand for a public good does not exist or its supply is well below the social optimum level.	
g. The private sector does not provide merit goods due to the lack of incentives and the existence of the free-rider problem.	
h. Positive externalities tend to be easier to measure than negative externalities.	
i. In a market for tradeable pollution permits, an increase in demand would raise the price of pollution rights without affecting the level of output.	
j. The socially optimal amount of pollution abatement occurs the social marginal benefit of abatement is zero.	

Task 4 – Explain...

a. How public goods differ from merit goods.

.....

.....

.....

- b. Why the government provides merit goods and services.
- c. Why the government seeks to reduce the consumption of demerit goods.
- d. With reference to the tragedy of the commons, how rational economic behaviour can lead to market failure.
- e. The use of fossil fuels in economic activity can be a threat to sustainability.
- f. One advantage and one disadvantage of direct government provision of public goods.
- g. How the existence of monopoly power is a type of market failure (*HL Only*)

Task 5 – Multiple Choice

1. Which of the following is least likely to be classified as a pure public good?
- A. National defence
 - B. Lighthouse
 - C. Street lighting
 - D. Government funded schools
2. Which of the following is least likely to be classed as a merit good?
- A. Education
 - B. Health care
 - C. Training and development
 - D. Fossil fuels

3. Which statement does not apply to merit goods?
- A. They are deemed to be of value by society
 - B. They are provided by the government, as private firms have no incentive to do so
 - C. They yield positive externalities
 - D. Governments believe they ought to be subsidized or provided free of charge
4. Which of the following statements is not a counter argument for the imposition of taxes on demerit goods such as alcohol and tobacco?
- A. It can encourage smuggling and unofficial market activity
 - B. The goods are highly price inelastic so consumption is unlikely to fall by the desired level
 - C. There are negative impacts on output and employment despite the low price elasticity of demand
 - D. It can help to internalise negative externalities of economic activity
5. Public goods differ from private goods because public goods
- A. Are excludable
 - B. Have no opportunity costs
 - C. Benefit free-riders
 - D. Benefit society
6. What do merit goods and public goods share in common?
- A. They both face the free-rider problem
 - B. They both have positive externalities of consumption
 - C. They are provided solely by the public sector
 - D. They are funded by taxation revenue of the government
7. The free market system would not supply public goods due to
- A. There being no demand for public goods in the free market economy
 - B. The existence of free-riders who benefit from consumption without having to pay
 - C. The inability of private sector firms being able to supply these
 - D. The marginal private benefit of consumption being lower than the marginal social benefit
8. The socially optimum level of output of merit goods exists when
- A. Marginal social benefits exceed marginal social costs by the greatest amount
 - B. Marginal social benefits exceed marginal private costs by the greatest amount
 - C. Marginal social benefits equal marginal social costs
 - D. Marginal social benefits equal zero
9. Public goods are goods and services that do not
- A. Exert externalities
 - B. Face a free-rider problem
 - C. Have rivalry or excludability
 - D. Have any opportunity cost

10. If a positive externality arises from the production of a good or service, the private sector firm will lack any incentive to raise its output because
- A. It does not receive any payment for the external benefit that is generated
 - B. There is a free-rider problem
 - C. Producer surplus is eliminated
 - D. Marginal private benefits of production exceed the marginal social benefits
11. Which of the following is not an example of a common access resource?
- A. National parks
 - B. Forests
 - C. Fishing grounds
 - D. National defence
12. Which of the following does not highlight the difference between public goods and common access resources?
- A. Only public goods are non-rivalrous
 - B. Only public goods are non-excludable
 - C. Common access resources suffer from a lack of sustainability
 - D. Common access resources are diminishable
13. Overfishing is an example of
- A. Tragedy of the commons
 - B. Merit goods
 - C. Public goods
 - D. Sustainable development
14. In a free market economy, which of the following is not a consequence of the price mechanism for common access resources?
- A. Degradation
 - B. Overexploitation
 - C. Overuse
 - D. Non-rivalry
15. The creation of a market for trading pollution rights would
- A. Reduce pollution to zero
 - B. Reduce the cost to taxpayers
 - C. Encourage firms to invest in pollution-reducing technologies
 - D. Encourage an increase in the supply of pollution permits
16. Ceteris paribus, an increase in the price of pollution permits will
- A. Reduce the amount of pollution
 - B. Encourage environmental groups to buy more pollution permits
 - C. Increase the supply of pollution permits
 - D. Increase the opportunity cost to firms that pollute

17. Works of art in an art gallery which can be enjoyed by those who do not pay to enter the gallery is an example of
- A. Public goods
 - B. Private goods
 - C. Common access resources
 - D. Marginal private benefit
18. Costs and benefits of consumption and production that are borne by third parties are known as
- A. External costs and benefits
 - B. Internal costs and benefits
 - C. Marginal social costs and benefits
 - D. Common access resources
19. Which of the following is not a market-based policy used to tackle the problem of externalities?
- A. Subsidies
 - B. Taxation
 - C. Legislation
 - D. Tradable permits
20. Which of the following is not a government response to the provision of public goods?
- A. Direct provision
 - B. Subsidies
 - C. Advertising to influence behaviour
 - D. Tradable permits
21. Government responses to the threat to sustainability are not limited by
- A. The diffusion of renewable energy
 - B. The existence of common access resources
 - C. The need for international cooperation
 - D. Globalization and the resulting demands for scarce resources
22. Sustainable economic growth can be pursued by the use of
- A. Pollution permits
 - B. Common access resources
 - C. Higher interest rates
 - D. Intellectual property rights such as copyrights, patents and trademarks
23. Poverty in less economically developed countries can create a threat to sustainability because
- A. The over-exploitation of land for agricultural use leads to negative externalities
 - B. Government debt means that funds cannot be used to provide merit and public goods
 - C. Government cannot raise sufficient tax revenue from those who generate negative externalities
 - D. Resources are scarce in less economically developed countries

24. Government responses to the threat of sustainability is least likely to include
- A. The imposition of carbon taxes
 - B. Legislation on the use of scarce resources, such as rules on international fishing
 - C. Creating incentives for firms to adopt clean technologies
 - D. Expansion of road networks in major cities to relieve traffic congestion
25. Which of the following does not present a case of market failure?
- A. Child obesity
 - B. Crime
 - C. Climate change
 - D. Common property resources
26. When either the buyer or seller of an economic transaction possesses more information than the other party, governments can deal with this market failure in a number of ways except by using *(HL Only)*
- A. Taxes and subsidies
 - B. Legislation
 - C. Regulation
 - D. Provision of information
27. When one party in an economic transaction, be they the buyer or seller, has more information than the other party, there is said to be *(HL Only)*
- A. Perfect knowledge
 - B. Trade secrets
 - C. Asymmetric information
 - D. Price rigidity
28. The existence of asymmetric information between buyers and sellers in a market will result in *(HL Only)*
- A. Excess demand in the market
 - B. Excess supply in the market
 - C. Market failure and inefficiencies
 - D. Free-rider problems
29. Asymmetric information is least likely to exist in which of the following cases? *(HL Only)*
- A. Second-hand (used) car market
 - B. Life insurance
 - C. Works of art
 - D. Fresh fruits and vegetables
30. Government responses to the abuse of market imperfections, such as monopoly market, do not include *(HL Only)*
- A. Legislation and regulation
 - B. Nationalization
 - C. Trade liberalization
 - D. Provision of common access resources

Chapter 12

1.5 Theory of the firm – Costs, Revenues and Profits (HL Only)

Task 1 – Costs Vocabulary Quiz

Identify the type of costs from the definitions given. Hint: answers appear in alphabetical order!

Key Term	Definition
	This refers to the output per unit of factor unit when fixed factors of production are held constant, e.g. the amount of output produced by each worker.
	The goal of firms that considers and accounts for the needs of its stakeholders such as employees, managers, shareholders, and the local community.
	This occurs in the short run when at least one factor input is fixed (such as capital or physical land) so increasingly variable factor inputs (such as labour) eventually reduces the marginal and total output.
	These production costs, such as loan repayments and salaries, do not change with the level of output.
	The period of time when all factors of production are variable, and therefore all costs of production are variable costs.
	This measures the change in output following a change in factor inputs. It is calculated by the change in total output divided by the change in factor inputs.
	This goal of private sector firms occurs when the positive difference between total revenue and total costs is at its greatest.
	Refers to the funds received from the sale of a firm's output.
	The period of time when at least one factor of production, such as capital or physical land, is fixed in the production process.
	Also known as abnormal profit, this refers to any profit greater than normal profit (when total costs of production equal total revenues from production), thereby creating incentives for firms to enter the market.
	This refers to the aggregate amount of money spent on production for any given level of output.
	This measures the sum of all physical output for a given quantity of factor inputs in the short run, such as the total output of the labour force.
	Also known as average costs, this concept is calculated by dividing the total costs of production by the level of output.
	Costs incurred directly from the production and sale of a particular product, e.g. raw materials and packaging costs.

Task 2 – True or False?

	True / False
a. Fixed costs do not vary with the level of output.	
b. Average costs of production will fall when the level of output increases.	
c. Average revenue is mathematically the same as the price per unit.	
d. Fixed costs are those that do not change.	
e. Economies of scale are likely to decrease the costs of production for a firm.	
f. Economies of scale are the reduction in costs achieved through increased output	
g. If a firm employs more people, then productivity will improve.	
h. In the short run, increased output will always reduce the average costs of production for a firm.	
i. If a firm employs 25 people with a total output of 500 units, then the average product is 20 units.	
j. Economists assume that capital investment is fixed in the short run, whereas labour input can be variable in the short run.	
k. For a firm with a downward sloping demand (average revenue) curve, its marginal revenue intersects the x-axis at the mid-point of the AR curve.	

Task 3 – Economies and Diseconomies of Scale

- a. Explain why is it relatively easier to enter the restaurant industry than to enter the pharmaceutical manufacturing industry.
-
-
- b. Outline two causes of external diseconomies of scale.
-
-
- c. Explain whether a firm would experience economies or diseconomies of scale given the following information: total costs of production increase from \$5,000 to \$6,000 following an increase in output from 200 units to 300 units, with fixed costs at \$2,000.
-
-
1. A firm may choose to demerge (break up) for the following reasons except to
- Avoid falling profits in the business
 - Focus on a smaller range of products and services
 - Enjoy economies of scale
 - Focus more specifically on a target market

2. Internal diseconomies of scale can be caused by
 - A. The exercise of control by managers being weakened with a larger workforce
 - B. Being unable to purchase stock at a discounted price
 - C. Traffic congestion causing delays to delivery of important stock
 - D. Advertising costs to a global audience

3. Technological economies of scale can only be feasible for a business if
 - A. Banks lend money for business to purchase the highly expensive technology
 - B. Capital equipment is capable of producing mass units of a product in a short time
 - C. There is sufficient market demand for the product
 - D. There is an economic boom

4. External economies of scale are cost savings available to the whole as a result of its
 - A. Industry, location
 - B. Business, location
 - C. Market, size
 - D. Business, size

5. Internal economies of scale are those that
 - A. Result from changes in production techniques
 - B. Increase due to the growth of the industry as a whole
 - C. Generate lower unit costs
 - D. Reduce units costs in the short run

6. Average costs can be lowered if a firm produces a range of related products rather than producing individual products. This is known as the benefits of
 - A. Internal economies of scale
 - B. Economies of scope
 - C. Diversification
 - D. Increasing returns to scale

7. If a firm increases its use of all factors of production but sees an increase in its average costs, this is a sign of
 - A. Internal diseconomies of scale
 - B. External returns to scale
 - C. Diminishing marginal returns
 - D. Decreasing returns to scale

8. External economies of scale can arise from
 - A. Bulk purchases of raw materials, parts and components at favourable prices
 - B. The introduction and use of advanced technology which doubles production but only adds 50% to costs of production
 - C. Specialised back-up services available in a particular region
 - D. Lower interest rates, thereby reducing the cost of borrowing to large companies

9. If a firm doubles all its factor inputs and finds that output increases by 50%, then the firm is said to have experienced
- Growth
 - Economies of Scale
 - Diseconomies of scale
 - Diminishing returns to scale
10. Which of the following is not a cause of internal diseconomies of scale?
- Poor communication between different departments
 - Lack of staff morale and motivation
 - Less control, direction and co-ordination of human resources
 - Late deliveries due to congestion in busy locations

Task 4 – Calculations

Wallets-R-Us Ltd. has fixed overheads of \$500 and sells 200 units per month. Each item sells for \$35 and has direct costs of \$15.

- i. Calculate the total costs per month for Wallets-R-Us Ltd.

- ii. Calculate Wallets-R-Us Ltd.'s profit for the month.

- iii. Calculate the change in the average costs of production at 100 units and 200 units of output. Comment on why the unit cost has dropped.

b. Ogilvie Candies has monthly fixed costs of \$3,000 and unit variable costs of \$2. Its current level of demand is 3,000 units each month. The average unit price is \$6.

- i. Calculate the firm's current average costs each month.

- ii. Calculate the profit if demand increases to 3,500 units per month.

c. The following data refers to the costs and revenues of Sangu Toys Ltd. when operating at 2,000 units of output per month:

Item	Cost/Revenue (\$)
Price	\$15
Raw materials per unit	\$5
Overheads	\$500
Rent	\$2,000
Salaries	\$3,000

i. Calculate the total cost of producing 2,000 units.

ii. Calculate the profit made by Sangu Toys Ltd. if the firm manages to sell all its output.

d. Rhapsody Sounds produces miniature speakers with the following monthly cost structures:

Total Output (speakers)	Total Costs (\$)
100	\$5,000
200	\$8,000
300	\$11,000

i. Assuming constant unit costs, what is the value of the monthly fixed costs for Rhapsody Sounds?

ii. What is the change in unit costs of production if Rhapsody Sounds changes from producing 100 units per month to 300 units per month?

iii. If Rhapsody Sounds manages to produce and sell 200 units per month and wishes to make a 150% profit margin, what price should each unit be sold for?

e. Calculate a firm's output level if its total variable costs = \$8,000 with its average fixed costs = \$30 and the average cost = \$80.

f. Refer to the following table for the next three questions:

Units of labour	Average product	Total product	Marginal product
0	-		10
1	10		
2		22	
3	13		
4		60	
5	12		
6		54	

- i. Calculate the average, total and marginal product from the given information in the table below:
- ii. Using the above, plot a diagram on graph paper to show the total product curve (at the top of the graph) with the average and marginal product curves (at the bottom of the graph).
- iii. At which level of factor input (units of labour) is total product maximised on the graph?

.....

.....

Task 5 – Explain ...

- a. The difference between fixed costs and variable costs:
.....
.....
- b. Why 'average fixed costs' will continually fall with increased levels of output.
.....
.....
- c. The difference between diminishing marginal returns and decreasing returns to scale.
.....
.....
- d. The difference between explicit costs and implicit costs as the two components of economic costs.
.....
.....
- e. Why a firm might choose to continue operating even if it earns zero economic profit.
.....
.....

- f. The change in productivity in the following scenario: a toy manufacturer employs a 21st worker with total output rising from 250 to 260 units per day.
- g. Why total product is maximized when marginal product is equal to zero.
- h. The difference between increasing returns to scale and constant returns to scale.

Task 6 – Cost and Revenue Formulae

Identify the category of cost / revenue from the given formulae.

Type of Cost / Revenue	Formula
	Total Costs ÷ Quantity produced
	Total revenue ÷ Quantity traded
	Change in total costs ÷ Change in output level
	Change in total revenue ÷ Change in output level
	Total Fixed Costs + Total Variable Costs
	Unit price x Quantity traded

Task 7 – Costs, Revenues and Profits Multiple Choice

- Costs which are totally independent of the level of output are known as
 - Fixed costs
 - Direct costs
 - Implicit costs
 - Variable costs
- The short run is the period of time when
 - There is at least one factor input fixed in supply
 - There is spare capacity in production
 - All factors of production can be varied
 - Labour cannot be substituted with capital intensive technologies

3. Which of the following is not a fixed cost for a restaurant?

- A. Bank loan repayments
- B. Waiting staff wages
- C. Air conditioning bills
- D. Rent to the property owner

4. Study the table below and determine the fixed costs of production for the firm.

Output	Variable cost \$	Total costs \$
10	1,500	3,845
15	2,250	4,595

- A. \$750
- B. \$1,500
- C. \$1,595
- D. \$2,345

5. If a firm has total costs of \$2,000 and fixed costs of \$1,100 for an output level of 600 units, then the average variable costs must be

- A. \$0.67
- B. \$1.5
- C. \$1.83
- D. \$3.33

6. Costs that are incurred as a result of production are known as

- A. Variable costs
- B. Indirect Costs
- C. Overheads
- D. Semi-variable costs

7. If you were given the 'average' (e.g. average cost), which other variable would be required to determine the 'total'?

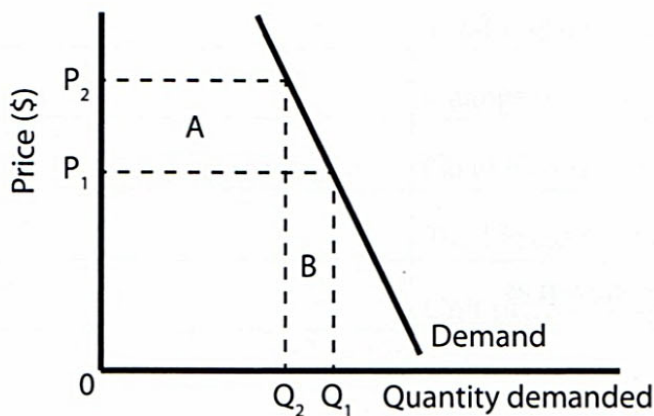
- A. Contribution
- B. Quantity
- C. Currency
- D. Unit of measurement

8. Examples of variable costs for a motor vehicle manufacturer do not include

- A. Costs of raw materials
- B. Piece rate payment systems
- C. Insurance costs
- D. Costs of component parts

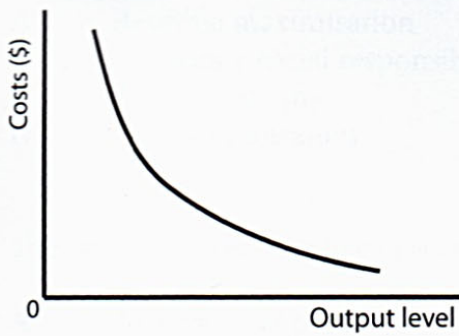
9. If a firm's average costs are falling, then its marginal costs must be
- Increasing at a faster rate
 - Falling too but at a faster rate
 - Falling too but at a slower rate
 - Constant
10. As the production level of a firm increases, which cost will fall continuously?
- Costs per unit
 - Average Variable Costs
 - Average Total Costs
 - Average Fixed Costs
11. Fixed costs can be described as
- Costs that vary with the output level in the short run
 - Costs that are static in the short run
 - Costs that must be paid to generate output
 - Costs from non-operating activities

12. What does the difference between areas A and B in the diagram below show?



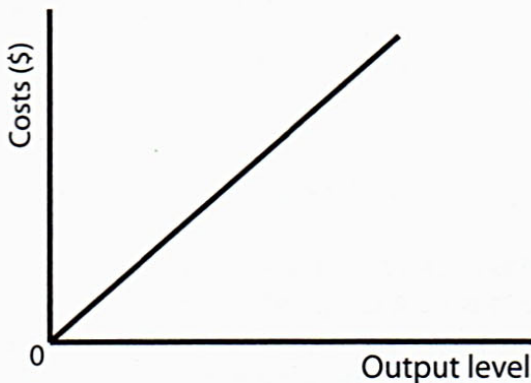
- Marginal cost
 - Marginal revenue
 - Price discrimination
 - Welfare loss
13. Which statement best describes diminishing marginal product?
- A fall in the marginal product as the quantity factor inputs rises
 - The average product rises as the quantity of the input rises
 - Falling marginal returns due to the substitution effect on demand
 - A fall in the average product as the quantity factor inputs rises

14. Which cost curve is shown in the following diagram?



- A. Average costs
- B. Average fixed costs
- C. Average variable costs
- D. Average total costs

15. Which cost curve is shown in the following diagram?



- A. Total costs
- B. Total variable costs
- C. Total fixed costs
- D. Total average costs

16. A firm breaks even (makes neither a profit nor a loss) when price is equal to

- A. Zero
- B. Marginal cost
- C. Average cost
- D. Variable costs

17. Which of the following is a fixed cost to Emirates Airlines?

- A. Sponsorship of Arsenal Football Club
- B. Aviation fuel
- C. In-flight meals and drinks
- D. Wages paid to aircraft cleaning crew

Questions 18-19 relate to the information given in the table

Cost of raw materials for A1 Bakery in June

Flour	\$10,600
Whipped cream	\$12,000
Fresh fruits	\$25,000
Output	\$11,900

18. Given the limited information, what is the break-even price?
- A. \$3
 - B. \$4
 - C. \$5
 - D. \$6
19. If the price is set at \$6, then the mark up per unit would be
- A. \$1
 - B. \$6
 - C. 50%
 - D. 100%
20. If marginal revenue is greater than marginal cost, then a profit maximising firm will
- A. Increase output
 - B. Reduce output
 - C. Raise price
 - D. Reduce price
21. When economic profit is zero, what type of profit is earned?
- A. Break-even
 - B. Normal
 - C. Supernormal
 - D. Economic
22. If a firm earns only normal profits, then it will
- A. Leave the industry
 - B. Attract new firms to join the industry
 - C. Earn zero accounting profit
 - D. Cover all costs, both economic and implicit, from its revenue
23. Profit is maximized when
- A. $P = MC$
 - B. $AC = AR$
 - C. $MC = MR$
 - D. $AC = MC$

24. Which of the following is least likely to be a goal of private sector firms?
- A. Revenue maximisation
 - B. Corporate social responsibility
 - C. Profit satisficing
 - D. Cost minimisation
25. The amount of revenue just enough to keep a firm in business is known as
- A. Supernormal profit
 - B. Economic profit
 - C. Abnormal profit
 - D. Normal profit
26. In economics, what type of profit occurs at the break-even point?
- A. Economic
 - B. Supernormal
 - C. Normal
 - D. Zero
27. Economic profit occurs when
- A. Abnormal profit equals total economic costs
 - B. Normal profit equals total accounting costs
 - C. Total revenue exceeds total accounting costs
 - D. Total revenue exceeds total economic costs
28. Normal profit is the amount of revenue needed to cover
- A. Implicit costs
 - B. Explicit costs
 - C. Opportunity cost
 - D. All of the above
29. The opportunity costs of all resources used in the production process by a firm are known as
- A. Accounting costs
 - B. Economic costs
 - C. Total costs
 - D. Implicit costs
30. Which of the following statements does not apply to the long run average cost (LRAS) curve?
- A. It is 'U' shaped due to economies and diseconomies of scale
 - B. Diminishing returns eventually set in, thereby causing the LRAS curve to rise
 - C. The minimum efficient scale occurs when all economies of scale have been exploited
 - D. The LRAS curve encompasses all short run average cost curves

Chapter 13

Theory of the firm – Perfect Competition (*HL only*)

Task 1 – Complete the missing words

The economic model of perfect competition describes a market where there is a very high degree of The assumptions of the perfectly competitive market are:

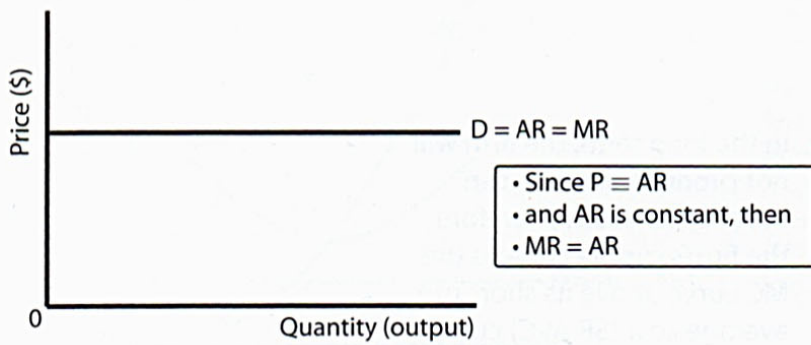
- There are buyers and sellers in the market
- No individual firm is large enough to influence the market level of output or the price, i.e. firms are said to be price
- There is freedom of entry to and exit from the industry
- Buyers and sellers have perfect of prices
- All firms in the industry produce a product, i.e. there is no product differentiation (products are identical).

A real world example that might fit this market structure is fruit and vegetable markets, where demand is perfectly price This is because the produce sold at these markets are homogeneous (bananas from one vendor are no different from those sold by other vendors in the market) and consumers have access to all information about No individual vendor is large enough to influence market output or market price. Therefore any seller who sets a higher price will have no demand whilst any vendor who lowers price will make a (or lower profit margin). It is also easy for firms to enter or leave the market.

Advantages of operating competitive markets include:

- Consumer sovereignty** - healthy competition ensures consumers get the right products at the right prices at the right time. Competition ensures higher output and lower (competitive) prices.
- Economic efficiency** - firms are efficient (they operate at the lowest point on the average cost curve) and efficient (charging a price that is equal to marginal cost).

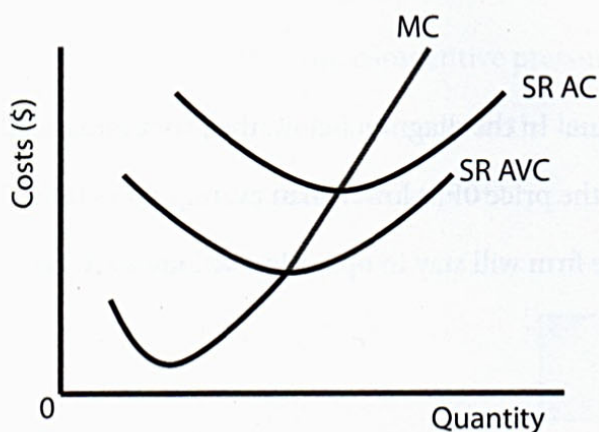
Whilst a price above the market price means no demand, there is no advantage in reducing price because the firm can sell its entire output at the (higher) market price. The demand curve for an individual firm in perfect competition is therefore, i.e. perfectly elastic:



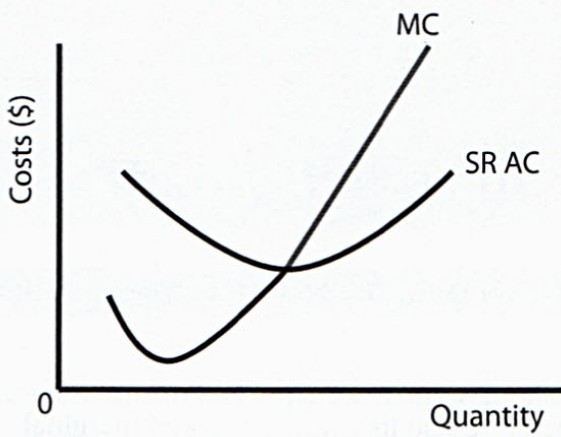
This demand curve for an individual firm in perfect competition is therefore also its and marginal revenue curves. If the firm sells all its output at one price, then this must also be the average revenue received. If the firm sells an extra (or marginal) unit of output it will receive the same price as all preceding units. Therefore, the marginal price (or revenue) will be the same as the average revenue.

In a perfectly competitive market, the supply curve of an individual firm will be its marginal cost curve. The marginal cost of production is the price at which a profit maximising firm will sell an extra unit of output, e.g. if the MC were \$5 and price was \$8, then the firm would make abnormal profit (profit over and above the normal profit included in the cost of producing that unit). If MC was \$5, the firm would still produce this marginal unit because it would earn profit by doing so. However, if MC was greater than price, the firm would not produce the extra unit since it would make a loss.

In the short run, an individual firm will not necessarily shut down production if it makes a loss. However, it will have to pay costs of production whether it produces nothing or whether it operates at full capacity. Hence, by continuing operations, even at a loss temporarily, any revenue over and above costs will make some contribution towards paying the firm's fixed costs. Therefore the firm will only close down (i.e. cease to supply) if AR (or price) is below (AVC). The firm's short run supply curve will therefore be that part of the MC curve above its AVC curve (see below).



The short run supply curve of a perfectly competitive firm is shown by the MC curve above the short run average variable cost (SR AVC) curve.

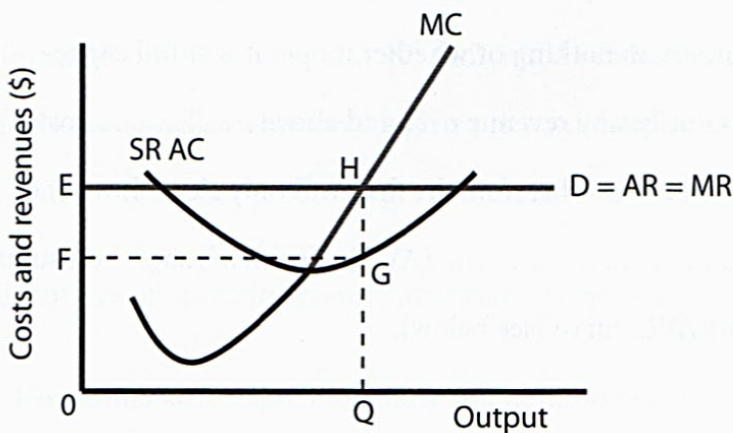


In the long term, the firm will not produce unless it can cover all its costs. Therefore the firm's supply curve is the MC curve above its short run average cost (SR AVC) curve

As firms are assumed to be profit maximisers, they will produce at that level of output where marginal cost equals marginal revenue (the $MC = MR$). This is because of the following conditions:

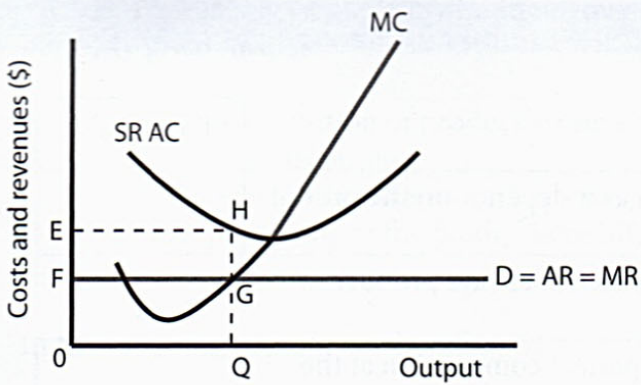
- If $MR > MC$, the firm would make profit by increasing output
- If $MC > MR$, the firm would have profit by increasing output
- Therefore, profits must be maximised when $MC = MR$

The market forces of and determine the price that the firm charges. The diagram below shows the perfectly elastic demand curve for an individual firm, where the market price is $0E$. The profit maximising level of output is at point H (where $MC = MR$), i.e. the firm supplies $0Q$ output. In this short run position, average revenue (QH) is greater than average cost (QG), so the firm earns abnormal profit. This is given by the area



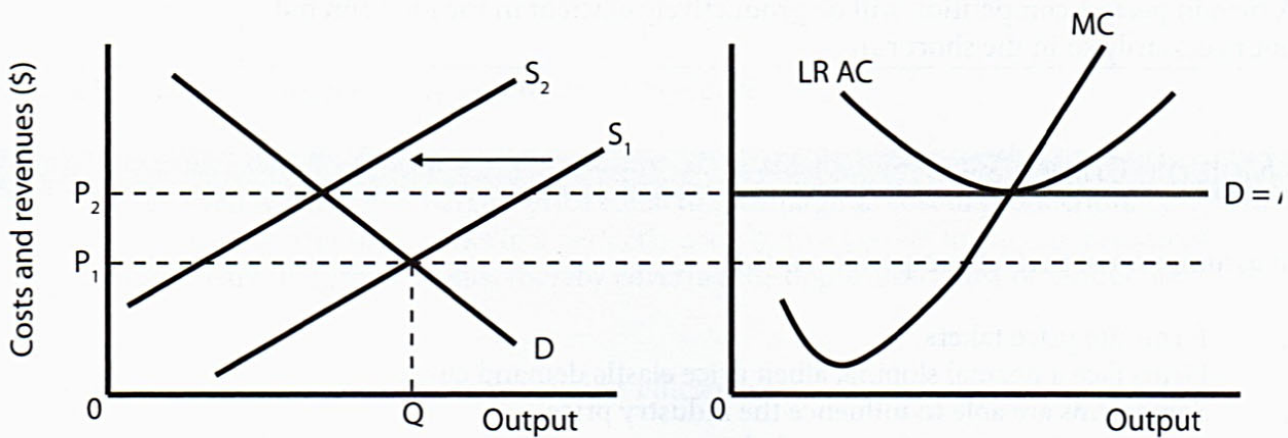
The profit maximising firm will produce $0Q$ output, where $MC = MR$ (point H). As price ($0E$) is greater than the average cost ($0F$), the firm makes abnormal profits in the short run.

It is also possible for an individual firm to make a loss in the short run. In the diagram below, the profit maximising (or loss minimising) level of output is $0Q$, where $MC = MR$. As the price $0F$ is lower than average costs ($0E$), the firm makes a total loss shown by the area However, the firm will stay in operation so long as AR is above or equal to AVC (the shut-down point).



The profit maximising firm will produce $0Q$ output, where $MC = MR$. As price ($0F$) is greater than the average cost ($0E$), the firm makes a loss in the short run.

In the long run, a perfectly competitive firm can only earn profits. These losses in industry lead to some firms exiting the industry so total industry supply will fall. Firms continue to exit until the industry as a whole returns to profitability. This is shown in the diagram, with the supply curve S_1 representing firms making a loss. As firms leave the industry, the industry supply curve shifts to the thereby raising the market price to S_2 , which is just high enough for firms to earn normal profit.



By contrast, the ability to earn abnormal profits in the short run would attract other firms to enter the industry. At a price greater than average costs ($AR > AC$), firms are making profit. This encourages new entrants to the industry, thereby increasing industry supply - until the price is just low enough for firms to make profit.

Therefore, in the long run, competitive pressures ensure equilibrium is established where firms neither make abnormal profits nor losses. Hence, in the long run, $AR = AC$ at the profit maximising point where $MC = MR$ (because firms are assumed to be profit). This means the following conditions hold in a perfectly competitive market:

$$AC = AR = MR = MC$$

Task 2 - True or False?

	True / False
a. Economic profit is not guaranteed in the short run as it depends on the prevailing market price.	
b. Firms in perfect competition are profit maximisers so will always produce at the output level where $MC = MR$.	
c. The shut-down price can be seen in a diagram for perfect competition at the point where $MC = MR = AVC$	
d. Productive efficiency, or technical efficiency, occurs at the point where $P = MC$ whilst allocative efficiency occurs when $MC = AC$.	
e. Allocative efficiency occurs when price is equal to marginal cost ($P=MC$), so no one can be made better off without making someone else worse off.	
f. In reality, most industries are imperfectly competitive in nature.	
g. Perfectly competitive firms are able to make supernormal profits in the long run.	
h. An individual firm's supply curve in perfect competition is represented by the marginal cost curve above the long run average cost curve.	
i. A firm in perfect competition will be productively efficient in the long run but not necessarily so in the short run.	

Task 3 – Multiple Choice

- An assumption of perfect competition is that
 - Firms are price takers
 - Firms face a normal sloping, albeit price elastic demand curve
 - Some firms are able to influence the industry price
 - Customers have imperfect knowledge
- Which of the options below explains why demand for a perfectly competitive firm is perfectly elastic?
 - As no single firm has market power, any change in output by the firm will have no effect on the market price
 - There are many small firms in the industry that focus on price competition
 - Firms in perfectly competitive markets can earn abnormal profits in the short run
 - There are no barriers to entry or exit in perfect competition
- Which of the following is not an assumption of the model of perfect competition?
 - No barriers to entry or exit
 - Firms and consumers have perfect knowledge
 - Consumers have brand loyalty
 - Firms produce an homogeneous product

4. Which factor does not explain why the demand curve facing an individual firm in perfect competition is perfectly price elastic?
- A. Perfect substitution of products from rival suppliers
 - B. Homogeneous output
 - C. Firms being price takers
 - D. Firms producing at the point where $MC = MR$
5. In the long run, supernormal profits will
- A. Attract new entrants into the industry
 - B. Mean there are no barriers to entry or exit
 - C. Lead to average revenues being higher than average costs
 - D. Raise market price above the average costs of production
6. What does it mean if an economy is productively efficient?
- A. Resources are to their best use although there might be some unemployment
 - B. More of one product can only be produced if less of another product is produced
 - C. There is even distribution of income and wealth
 - D. Output is produced at the level where $MC = MR$
7. Which statement does not apply to allocative efficiency?
- A. Occurs when firms produce at the optimal level of output desired by consumers
 - B. Achieved when firms charge a price equal to the marginal cost of production, i.e. $P = MC$
 - C. The price mechanism works in a perfectly competitive market to allocate resources
 - D. Firms earn abnormal profits, thereby covering the opportunity cost of production
8. Which statement does not apply to productive efficiency?
- A. Occurs when output is produced with the minimum amount of factor inputs
 - B. There is no wastage or unemployment of scarce resources
 - C. Achieved at the output level with average costs are minimised, i.e. $MC = AC$
 - D. Occurs when the price mechanism allocates resources to their best use
9. Productive efficiency refers to
- A. The use of the least-cost method of output
 - B. Production that shifts output towards the production possibility curve
 - C. The full employment of scarce resources in the production process
 - D. Maximising profits where $MC = MR$
10. Which of the following is not a limitation of the perfect competition model?
- A. Few industries actually follow the model of perfect competition
 - B. Assumes all products sold are homogeneous yet this is rarely the case in real life
 - C. Assumes some markets have very low, if any, barriers to entry
 - D. Assumes that consumers have perfect information on all prices of all products

Chapter 14

Theory of the firm – Monopoly (HL only)

Task 1 – Complete the missing words...

A is a market structure dominated by one supplier with huge market power and sovereignty. As there is no competition, the firm can charge prices and produce output than would otherwise be the case. It is therefore less efficient than other forms of market structure. This model can only be sustained in the long run as there are extremely high that prevent other firms from entering the market. These obstacles are essentially the sources of monopoly power as they minimise the threat, if any, of new firms setting up in the industry. They include: economies of scale, ownership of essential resources, existence of i..... p..... r..... (namely patents, trademarks and copyrights) and legal barriers to entry.

Note that monopolists do not have complete market power – they cannot charge ‘whatever’ price they want because whilst they can control, they cannot control market Under the model of monopoly, the firm is the only one in the industry, so the demand curve for the monopolist is downwards sloping. This means that the monopolist must reduce price if it wants to sell more products. It is also incorrect to assume that all monopolists are ‘bad’ for society; there can be benefits of monopolies to society:

- As the monopolist controls market supply, huge can be gained, i.e. average costs of production fall. This means the monopolist can sell larger output *and* at cheaper prices.
- Monopolists, rather than small-sale firms, are more likely to have the financial funds to undertake (R&D). This can help to generate new ideas, new products and processes, and improve the capacity of the economy.

However, criticisms of monopolies include:

- Productive inefficiency – profit maximising monopolies have no incentive to operate at the lowest point on the average cost curve. As they are price, they can limit supply, thereby charging higher prices than in competitive markets.

- **Allocative inefficiency** – as monopolists do not face competition (or much of it), there is little incentive to supply where (the condition for allocative efficiency). Instead, it is able to supply at a level of output and charge a price compared to competitive markets.

Various categories of monopolies include:

- **Pure monopolies** - A pure monopolist is a firm with % market share, i.e. it is the sole supplier of a good or service. A near, real-world example is Mabuchi Motor Company which has around 90% market share of the world's electric motors for rear-view door mirrors for vehicle manufacturers.
- **Legal monopolies** - These firms are protected from competition by law in order to prevent wasteful competition or in order for an essential service to be provided to the general public, e.g. postal services or transport.
- **Regional monopolies** - These firms hold monopoly power in a specific area or location. Any firm that is a sole supplier of a certain service or good in a remote town would be an example.
- **Natural monopolies** - These exist when the market can only sustain supplier. For example, it is regarded as to have more than one supplier of telephone cables, gas pipes or rail tracks since a monopolist could provide these with huge savings compared to many smaller firms that would not benefit from economies of scale.

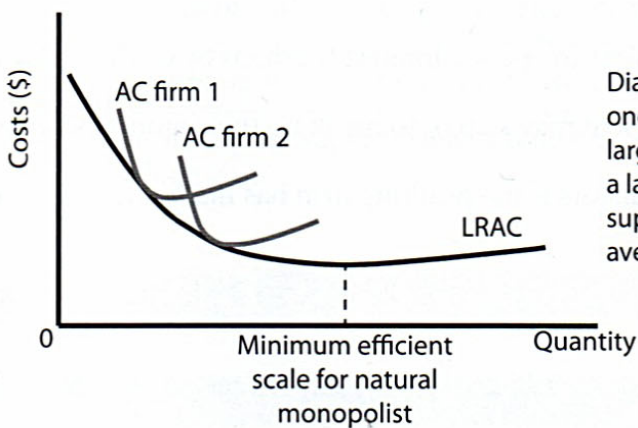
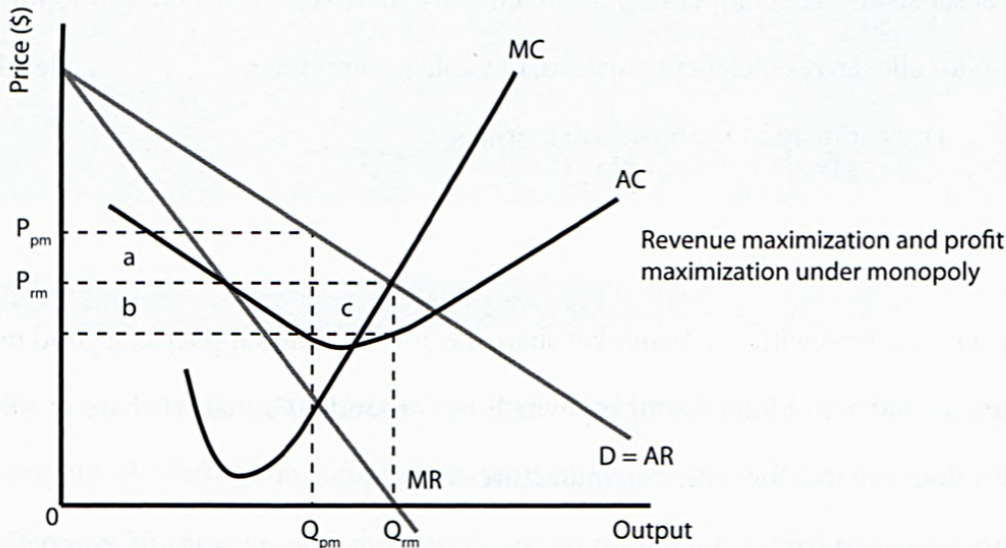


Diagram for natural monopolists:
one supplier can achieve much larger cost savings by operating at a larger scale than two competing suppliers along the long run average cost (LRAC) curve.



A profit maximizing monopolist would supply output at the level where $MR = \dots\dots\dots$. Thus, it will supply $\dots\dots\dots$ output and charge a price of $\dots\dots\dots$. The profit earned by the monopolist is shown by the areas $\dots\dots$ and $\dots\dots$. By contrast, a revenue maximising monopolist will produce at the output level where $MR = \dots\dots\dots$. Thus, the price charged is $\dots\dots\dots$ with output at $\dots\dots\dots$. The profit earned by the revenue maximising monopolist is shown by the areas $\dots\dots\dots$ and $\dots\dots\dots$. Such monopolists might choose not to profit maximise (so earn less profits) perhaps to keep out other firms from the industry or because any $\dots\dots\dots$ profits may attract public criticism and therefore the unwanted attention of regulators from the government.

If monopolies, whatever their form, are seen to be acting against the public interest (perhaps by deliberately restricting competition or by $\dots\dots\dots$ fixing) then the government may step in to break up their monopoly powers. For example, a merger to takeover may be prohibited by regulators if the resulting firm has market $\dots\dots\dots$ and market power deemed to be against the interest of society.

Task 2 – Explain...

a. Why a private sector monopoly might be regarded as inefficient in terms of resource allocation.

.....

.....

.....

b. Why a monopolist is able to earn supernormal profits in the long run.

.....

.....

.....

.....

- c. Two disadvantages of monopolies compared to perfectly competitive industries.
- d. Two advantages of monopolies.

Task 3 – True or False? 👍👎

	True / False
a. A monopolist can make abnormal profit in both the short and long run.	
b. Firms in perfect competition are always more efficient than those in monopolistic markets.	
c. A misallocation of resources is most likely to occur in a monopolistic market if price far exceeds the marginal costs of production.	
d. Monopolists can earn supernormal profits in the long run.	
e. It is assumed that the monopolist is a short-run profit maximiser.	
f. It is not possible for a monopolist to make a loss, given the lack of competition.	
g. A monopolist that earns abnormal profits does so by setting price above the marginal cost.	
h. Economies of scale can act as a barrier to entry.	
i. A pure monopolist can control the market demand.	
j. Under monopoly, supernormal profits can be earned in both the short run and in the long run.	

Task 4 – Multiple Choice

- Which one of the following is least likely to be a feature of a monopolist?
 - Profit maximiser
 - Price setter
 - Productive efficiency
 - Exploitation of economies of scale
- A monopolist maximises total revenue when the elasticity of demand is
 - Equal to one (unitary)
 - Price elastic
 - Price inelastic
 - Zero

3. Which of the following is most likely to be a feature of a monopolist?
 - A. Normal profits are earned in the long run
 - B. There are very high or extreme barriers to entry
 - C. Price is lower to gain market share
 - D. Product differentiation

4. Which of the following is not a barrier to entry?
 - A. Intellectual property rights such as copyrights and patents
 - B. High set-up costs
 - C. Brand loyalty for existing products
 - D. The existence of abnormal profits

5. Which of the following businesses is most likely to be considered as a pure monopoly?
 - A. Postal service
 - B. Hair salons
 - C. Private fee paying schools
 - D. Supermarkets

6. Features of a natural monopoly do not include
 - A. Economies of scale
 - B. High fixed costs
 - C. High set-up costs
 - D. Loss-making services

7. The Herfindahl index for a pure monopolist is
 - A. 1
 - B. 10
 - C. 100
 - D. 10,000

8. A pure monopolist will
 - A. Fix the price and the level of output of its product
 - B. Be able to increase its sales revenues but not its market share
 - C. Always make abnormal profits
 - D. Produce at the minimum average cost in the long run

9. Which condition holds under long run equilibrium for a monopolist?
 - A. Economic profit
 - B. Marginal revenue exceeds marginal cost
 - C. Productively efficiency
 - D. Allocative inefficiency

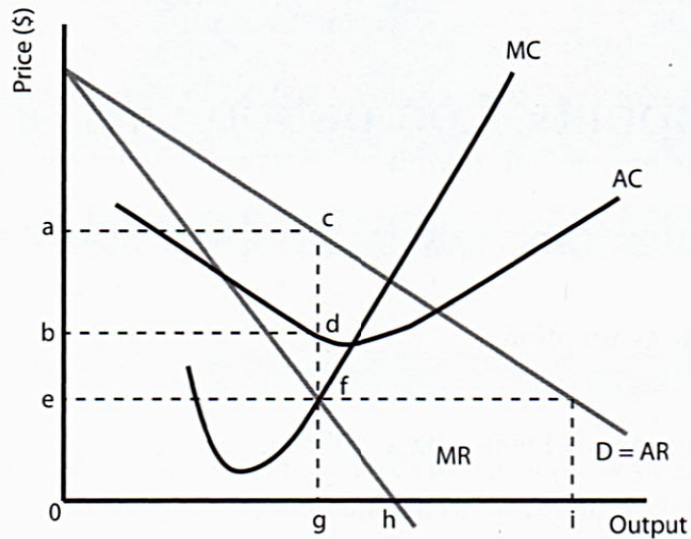
10. A natural monopoly occurs when
- A. Long-run average costs decline continuously
 - B. There are increasing returns to scale
 - C. A firm has significant market power
 - D. The government regulates monopoly behaviour
11. Which characteristic applies to monopoly rather than perfect competition?
- A. Freedom of entry to and exit
 - B. Differentiated products
 - C. Only one supplier of a product
 - D. Firms are price takers
12. The assumed characteristics of monopoly do not include
- A. There is a dominant firm in the industry
 - B. There are no real close substitutes in the market
 - C. There are significant barriers to entry
 - D. There is productive efficiency in the long run
13. Which of the following statements is true for monopoly?
- A. Has a low concentration ratio as there is a single supplier
 - B. Faces a downward sloping demand curve
 - C. Produces at a output level where marginal revenue is greater than marginal cost
 - D. Has a high degree of consumer sovereignty
14. Which statement below applies to a monopolist with a downwards sloping demand curve?
- A. The monopolist's demand curve is perfectly price inelastic
 - B. Monopolists can be more efficient than perfectly competitive firms
 - C. The marginal revenue curve intersects the marginal cost curve at the lowest point on the average cost curve
 - D. Marginal revenue is less than price
15. Which statement about monopolists is correct?
- A. Marginal revenue is positive when total revenue is at its maximum
 - B. When marginal revenue is greater than marginal cost, the firm makes a profit but it makes a loss when the marginal revenue becomes negative
 - C. Total revenue increases when marginal revenue is positive, but falls when the marginal revenue becomes negative
 - D. Marginal revenue is negative at all prices below the mid-point on a downward sloping demand curve

Questions 16 – 17 refer to the demand schedule shown in the table below:

Price (\$)	Quantity demanded
10	1
9	2
8	3
7	4

16. The marginal revenue from selling the third unit of output is
- A. \$1
 - B. \$2
 - C. \$4
 - D. \$6
17. Total revenue will be maximised at
- A. \$10
 - B. \$9
 - C. \$8
 - D. \$7
18. Suppose that a monopolist can sell 10 units of its output at \$9 per unit and 11 units at \$8.50 per unit. What is the marginal revenue of the eleventh unit?
- A. \$0.50
 - B. \$3.50
 - C. \$8.50
 - D. \$93.5
19. Suppose that a monopolist can sell 8 units of output at \$5 per unit and 9 units at \$4.90 per unit. The monopolist will produce and sell the ninth unit if its marginal cost is
- A. Equal to or less than \$0.10
 - B. Equal to or less than \$4.10
 - C. Equal to or less than \$4.90
 - D. Equal to or less than \$5.00
20. Suppose that a monopolist has the following cost and revenue structure: $AC = \$5$, $P = \$6$, $MC = \$3$, and $MR = \$4$. It follows that the monopolist
- A. Makes a loss by increasing its output
 - B. Earns normal profit by increasing its output
 - C. Earns abnormal profit by increasing its output
 - D. Earns greater profit by reducing its output

Questions 21 – 25 refer to the diagram below



21. The profit maximising monopolist will charge a price of

- A. 0e
- B. 0b
- C. 0a
- D. ab

22. Abnormal profit is shown by the area

- A. abcd
- B. bdef
- C. acef
- D. 0acg

23. The output level of the monopolist will be

- A. 0g
- B. 0i
- C. At the point where MC = AC
- D. At the point where MC = AR

24. At what level of output would the monopolist maximise revenue?

- A. 0g
- B. 0h
- C. 0i
- D. The output level where MC = MR

25. At the profit maximising level of output, total costs for the monopolist is shown by the area

- A. 0acg
- B. 0bdg
- C. 0efg
- D. bdef

Chapter 15

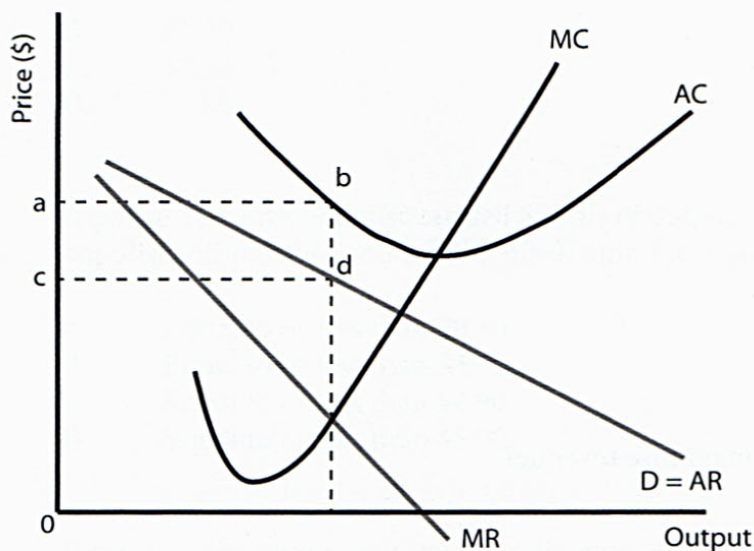
Theory of the firm – Monopolistic Competition (HL only)

Task 1 – Complete the missing words

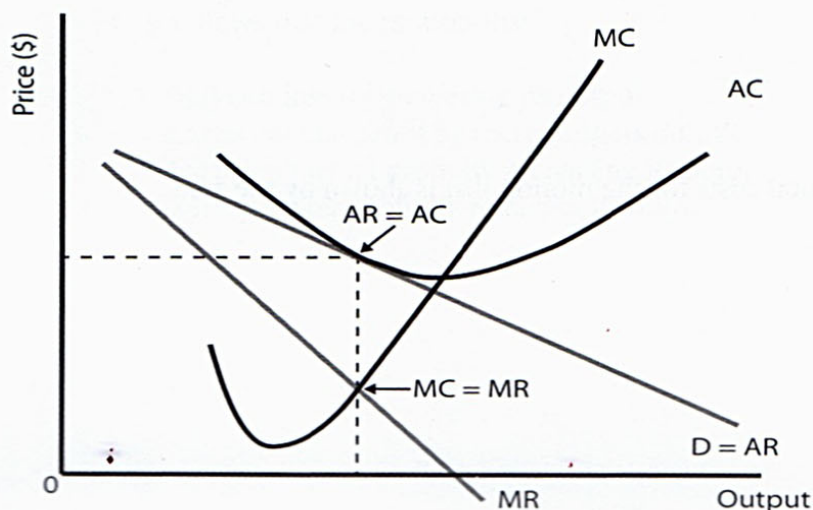
The model of monopolistic competition has three basic assumptions:

- There are a large number of relatively firms, none of which have sufficient power to greatly affect its competitors
- There are very few, if any, to entry or exit from the industry
- All firms produce slightly products.

The final assumption means that competition is a major feature in monopolistically competitive industries. Hence, the existence of loyalty means that firms have, to a certain extent, control over the prices of their products. All firms face a downwards sloping curve, which is relatively price e..... as there are many (albeit slightly differentiated) substitutes. Examples of businesses in such market structures might include: restaurants, hair salons and clothes retailers.



It is possible for monopolistically competitive firms to earn a profit or a loss in the short run, depending on the nature of its costs. For example, this diagram shows a-making firm because at the profit maximizing (or the loss-minimising) level of output, average exceed average (price). In the diagram, this is shown by the area abcd.



However, just like in perfect competition, any profits made by existing firms would attract new entrants due to the very low entry barriers. Similarly, any losses would result in a market supply as there are very few, if any, barriers to exit. Hence, under the model of monopolistic competition, only profit is made in the long run, as shown in the diagram.

In monopolistic competition, firms are neither allocatively efficient nor productively efficient in both the short run and long run (rather like in the model of). Unlike a monopolist that is able to restrict and sets its price, inefficiencies occur in monopolistic competition due to the vast amount of consumer choice. Unlike in perfect competition, firms face a downward sloping demand curve because products are d....., i.e. consumers have a variety of products to choose from.

Task 2 – Explain...

a. Why product differentiation leads to a negatively sloped demand curve in monopolistic markets (rather than a perfectly elastic demand curve as seen in perfectly competitive markets).

.....

.....

.....

b. Two examples of non-price competition used by monopolistically competitive firms.

.....

.....

.....

c. How firms in monopolistic competition differ from those in perfect competition.

.....

.....

.....

d. How firms in monopolistic competition differ from monopolists.

.....

.....

.....

Task 3 - True or False?

	True / False
a. The demand curve of a monopolistically competitive firm is less price elastic than that of a perfectly competitive firm.	
b. Firms in monopolistic competition supply differentiated, but similar products.	
c. The monopolistically competitive firm maximizes profits when price is set equal to the marginal cost of production.	
d. In the long run monopolistically competitive firms make normal profits because they operate at the minimum point on their average cost curve.	
e. Firms in monopolistically competitive firms do not make any economic profit in the long run.	
f. Non-price competition is a feature of both oligopoly and monopolistic competition.	

g.	An industry with a five-firm concentration ratio of 25 per cent is an example of monopolistic competition.	
h.	The use of trademarks and branding are common features of monopolistically competitive markets.	
i.	A monopolistically competitive firm has a highly price elastic demand curve, but less so than that of a perfectly competitive firm.	

Task 4 – Multiple Choice

1. Which of the following is not a characteristic of firms operating under monopolistic competition?
 - A. Imperfect knowledge
 - B. Productively efficient in the long run
 - C. Low barriers to entry and exit
 - D. Price setters

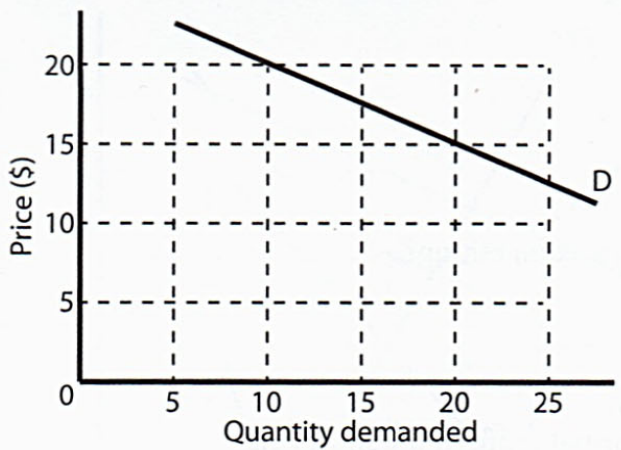
2. The demand curve of a monopolistic competitive firm will be more price elastic when there is
 - A. a larger number of firms in the industry
 - B. a high degree of product differentiation
 - C. time for customers to search for substitute products
 - D. a lower number of rivals in the industry

3. Under the model of monopolistic competition
 - A. Smaller firms in the industry face a perfectly price elastic demand curve
 - B. Firms make normal profits in the long run
 - C. Products are homogeneous due to the intensity of competition
 - D. There are significant entry barriers to prevent new firms from entering the industry

4. Effective product differentiation, through advertising and branding, will tend to make
 - A. Demand more price inelastic
 - B. Demand more price elastic
 - C. Supply more inelastic
 - D. Supply more price elastic

5. In monopolistically competitive markets
 - A. Firms compete solely on product differentiation, branding and advertising
 - B. A large number of competing firms produce differentiated products
 - C. A large number of firms produce standardised or homogeneous products
 - D. Many firms compete in an industry dominated by a few large firms

6. In the diagram below, the marginal revenue of the 20th unit of output is



- A) \$200
- B) \$100
- C) \$50
- D) \$10

7. Which of the following is not a characteristic of monopolistic competition?

- A. A large number of competing firms
- B. Mutual interdependence
- C. Low entry barriers
- D. Product differentiation

8. The model monopolistic competition assumes that

- A. Allocative efficiency exists due to the large number of sellers and low entry barriers
- B. Market power is highly concentrated
- C. Firms will engage in non-price competition
- D. Economic profit is earned in the long run

9. Which company is most likely to be classified as a monopolistic competitor?

- A. H&M (clothing)
- B. Brown's fishmongers (sole traders)
- C. Apple (smartphones)
- D. Greenpeace (non-government organization)

10. The short run profit-maximizing monopolistically competitive firm will set its price

- A. Equal to marginal revenue
- B. Equal to marginal cost
- C. Above its marginal revenue
- D. Above its marginal cost

11. The long run profit-maximizing monopolistically competitive firm must set its price

- A. Equal to its marginal cost
- B. Below its marginal cost
- C. Above its average total cost
- D. Equal to its average total cost

12. Which long-run condition holds true for firms in monopolistically competitive firms?

- A. $P = MC$
- B. $MR > MC$
- C. $MC = MR$
- D. $MC = AC$

13. Which of the following does not apply to monopolistic competition?

- A. Consumers have a wide variety of choice
- B. Heavy advertising expenditure
- C. Firms operate at full capacity in the long run
- D. Firms can make normal profit, a loss or abnormal profit in the short run

14. Identify the incorrect statement below

- A. Product variety is greater in monopolistic competition than in perfect competition
- B. Monopolistically competitive firms do not operate at the lowest point on their ATC curve because economies of scale are limited by product differentiation
- C. Products can be homogeneous or differentiated in monopolistically competitive markets
- D. Neither productive efficiency nor allocative efficiency can be achieved in monopolistically competitive markets in the long-run

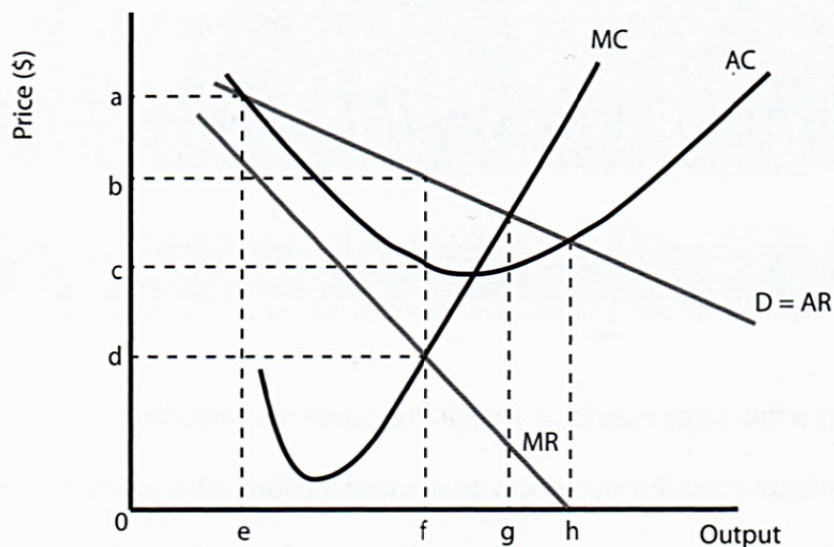
15. In the short run, a monopolistically competitive firm's profit

- A. is maximized at the output level where marginal revenue is zero
- B. can be positive (supernormal), negative (loss) or zero (normal)
- C. will always be zero due to relatively low barriers to entry
- D. is always positive as firms supply differentiated products

16. Which of the following statements apply to monopolistically competitive firms?

- A. In the long run, they operate at the lowest point on the average cost curve
- B. They are productively efficient only
- C. They are allocatively efficient only
- D. They are neither productively efficient nor allocatively efficient

Questions 17 – 20 refer to the diagram below



17. The monopolistically competitive firm's profit-maximizing price in the short run will be

- A. 0a
- B. 0b
- C. 0c
- D. 0d

18. The monopolistically competitive firm's profit-maximizing output in the short run will be

- A. 0e
- B. 0f
- C. 0g
- D. 0h

19. In the short run, the monopolistically competitive firm will make

- A. A per unit loss of cd
- B. A per unit loss of bd
- C. A per unit profit of bc
- D. A per unit profit of ad

20. What will occur in the long run, given the situation shown in the above diagram?

- A. Firms will leave the industry, thereby forcing up the price
- B. Firms will enter the industry, thereby forcing down the price
- C. Average costs will fall as more firms enter the industry
- D. Output will increase due to the intensity of competition

Theory of the firm – Oligopoly (HL only)

Task 1 – Complete the missing words... ✍

An oligopoly is a market structure dominated by a few large suppliers with a high degree of market concentration. Examples of such markets include petroleum, carbonated drinks producers and sports apparel. There are substantial entry barriers to the industry. Homogeneous oligopolists supply products that are undifferentiated, such as steel or petroleum. By contrast, differentiated oligopolists supply branded, differentiated products such as breakfast cereal or smartphones. The model of oligopoly assumes mutual interdependence, i.e. each oligopolistic firm considers the reactions of its rivals when determining its pricing policy. Restrictive trade practices (RTPs) are strategies used by oligopolists to restrict competition in an industry. They tend to raise the price and/or reduce output, thereby causing a loss in allocative efficiency.

Concentration ratios measure the degree of market concentration in a market by calculating the percentage of total sales accounted for by the largest firms in the industry. So, a four-firm concentration ratio of 75 means that the largest four firms in the market account for 75% of the industry's sales. The higher the ratio, the more concentrated (oligopolistic) the market tends to be. The Herfindahl Index can be used to compare the degree of market power in an industry. For example, assume two industries both have a four-firm concentration ratio of 60% as follows, with the remaining 40% accounted for by 10 other firms:

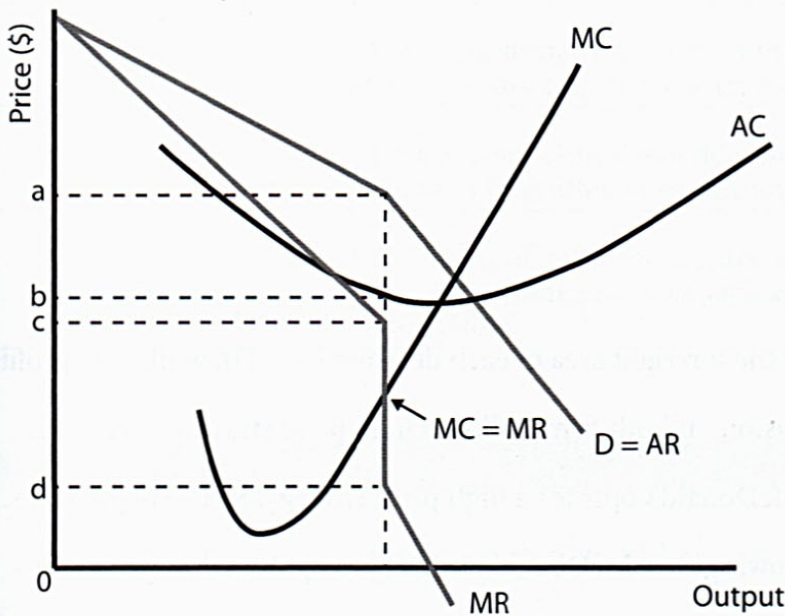
- Industry A: the top 4 firms each account for 15% market share
- Industry B: the top 4 firms have a market share of 25%, 20%, 10% and 5%.

The Herfindahl Index for Industry A would be: 1.8. The Herfindahl Index for Industry B would be: 2.25. The higher the Herfindahl Index, the more concentrated the industry. This means that in the above case, industry B is more oligopolistic than industry A.

Cartel oligopoly exists where firms agree to reduce the amount of competition by acting together as though they were a monopolist, e.g. agreeing to raise prices at the same time. Collusion is easier to achieve when a very small number of oligopolistic firms produce a homogeneous product, thereby acting as a monopolist. A cartel usually occurs following a formal agreement between oligopolists to fix prices, thereby effectively acting as monopolists. The OPEC (Organization of Petroleum Exporting Countries) - an organization that attempts to limit the world supply of

crude oil so as to raise its price - is probably the best known example of a cartel. Cartel structures tend to be difficult to maintain in the long run because individual firms (members) can find it profitable to cheat on agreements. In many countries such as the United States and the EU, cartels violate anticompetitive laws so are banned. refers to implicit cooperation or secret conspiracies between oligopolists to set prices, perhaps by following the pricing strategy of the market leader. This often takes place because collusion and cartels are illegal, i.e. these are the unwritten rules of collusive behaviour (also known as i..... collusion or covert collusion).

By contrast, oligopoly exists where firms in the industry act and compete independently. Price stability tends to exist in oligopolistic markets - rival firms would simply retaliate and match any price reduction. In extreme cases, this could even cause a By contrast, a rise in price might not be followed by others as the relatively lower price can attract some of the competitor's customers. The kinked demand curve model explains price rigidity in oligopolistic markets.



In this diagram, the profit maximising oligopolist supplies at the output level where $MC = MR$. At this level of output, average costs are whilst the price charged is Thus the oligopolist makes profit.

Due to the interdependence and asymmetric nature of oligopolistic firms, a price hike is not followed by rivals whereas a price reduction is matched by competitors. Thus there is a kink in the demand curve at the price The diagram shows that there is therefore price rigidity between the price levels and

One criticism of the kinked demand curve theory is that it ignores competition - a significant feature of oligopolistic markets. For example, supermarkets compete by branding (such as 'own label' products) and loyalty cards (to foster brand loyalty). oligopoly exists where a small number of large firms produce dissimilar goods in terms of product design and quality (such as Apple, Samsung and Nokia in the smartphone industry). This is markedly different to homogeneous oligopoly which exists when oligopolists produce or sell virtually products (such as BP, Shell and Exxon in the petroleum sector).

..... theory refers to a situation in which the outcome (also known as the payoff) of a player in a game depends on the actions of other players in addition to the action taken by the player. It is based on or more firms competing in an industry with each firm having incomplete information about the rivals' intentions. For example, if KFC decides to expand in Vietnam, the dominant strategy for McDonald's and Burger King is probably to go ahead with their expansion plans. If they do not then KFC will be likely to enjoy greater market share and profits. However, overseas expansion is relatively difficult and there is never a guarantee that the strategy will succeed. The Prisoners' can help to explain why price fixing agreements between oligopolists is likely to break down. The model shows that oligopolists can increase their profits through collusion rather than competing independently.

McDonald's Pricing policy

		McDonald's Pricing policy	
		High	Low
KFC's pricing policy	High	A \$20m \$20m	B \$30 \$10
	Low	C \$10m \$30m	D \$15m \$15m

The above matrix shows the profits of McDonald's in the top right area of each decision (A - D), whilst the profits of KFC are shown in the bottom left area of each decision. If both firms follow a high price strategy, then both firms will make a million profit. However, if McDonald's opts for a high price strategy, KFC will gain million profit by adopting a price strategy. Knowing this, McDonald's is likely to opt for a low price strategy, in the hope that KFC would charge high prices (decision). Hence, independent decision making is likely to lead to individual losses, both firms gravitate to adopting a low price strategy (decision), with both companies earning \$15 million profit. Although illegal in most parts of the world, collusion would mean that both firms opt for decision, thus earning an extra million each compared to independent decision making and direct competition. However, with collusion there is still the temptation for either firm to cheat by opting for a low price strategy (decisions B and C).

Task 2 – Vocabulary Quiz

Identify the correct key terms from the clues below. *Hint*: answers appear in alphabetical order.

Key term	Definition
	Formed when there is an official agreement between oligopolistic firms to fix prices and/or output, thereby gaining monopoly power.
	This is an agreement between two or more oligopolists to limit competition or to gain an unfair advantage, e.g. limiting output or price fixing. Such acts are usually illegal and therefore the agreements are undisclosed (secretive).
	This is a measure of the degree of market power within an industry by calculating the combined market share of the largest few firms in the industry.
	The theory that outlines how firms in an oligopoly consider the actions of rival firms before deciding what to do, based on probable numerical outcomes.
	Theory that shows price rigidity in oligopolistic markets because rivals do not follow a firm that raises price but will match any price reduction.
	A pricing strategy often used in a collusive oligopoly to establish prices at a level that discourages new entrants from the industry.
	Type of competition that does not focus on price but product differentiation, e.g. branding, after-sales care and packaging.
	This form of collusion occurs when two or more firms implicitly agree on restrictive trade practices such as price cutting, price leadership, or excessive advertising.

Task 3 – Explain... 

a. Two examples of non-price competition, with the use of appropriate examples.

.....

.....

b. Two examples of restrictive trade practices (RTP).

.....

.....

c. Three assumptions or features of oligopoly.

.....

.....

d. Why there is a tendency for firms in a cartel to compete.

.....

.....

- e. What it means by an industry having a “four-firm concentration ratio of 83%”.
-
-
- f. One reason why branding and advertising might enhance economic efficiency, and one reason why they might hinder economic efficiency.
-
-

Task 4 - True or False? 🇸🇮 🇸🇮

	True / False
a. Firms in a cartel act collusively.	
b. The kinked demand curve theory suggests that oligopolistic firms do not tend to engage in price competition.	
c. Oligopolistic firms act independently of each other.	
d. Oligopolistic firms make asymmetric decisions based on imperfect knowledge.	
e. A cartel is most likely to be successful when there are a few dominant producers of a standardised product.	
f. According to the kinked demand curve theory, the price elasticity of demand is relatively price inelastic in response to a fall in price.	
g. Product branding is a key feature of oligopolies.	
h. Oligopolists engage in both price and non-price competition.	
i. Oligopolistic markets feature a few dominant firms producing either a differentiated or a homogeneous product.	
j. If an oligopoly is faced with a kinked-demand curve, total revenue will fall if it either increases or decreases price.	

Task 5 – Multiple Choice ☑

1. Which of the following does not necessarily apply to oligopolistic markets?
- A. A small number of firms
 - B. Barriers to entry
 - C. Product differentiation
 - D. Non-price competition
2. A key difference between oligopolistic firms and those operating in monopolistically competitive market is that
- A. The existence of branding and advertising
 - B. The ability to earn supernormal profits in the short run
 - C. The presence of non-price competition
 - D. Whether products are homogenous and/or differentiated

3. The four largest firms in industry A produce 40% of the industry's output. In industry B, the four largest firms account for 60% of the industry's sales. It can therefore be concluded that
- A. Firms in industry A are larger than those in industry B
 - B. Firm in industry A are less profitable than those in industry B
 - C. The concentration ratio is higher in industry B than in industry A
 - D. There is a better chance of survival for firms in industry B than in industry A
4. Oligopoly can be best described as a market structure where
- A. A large number of small firms produce similar products
 - B. Several firms compete with each other
 - C. A small number of firms dominate the industry
 - D. Several large firms use price competition
5. Which of the following is not a feature of oligopolistic markets?
- A. Collusion
 - B. Asymmetric information
 - C. Product differentiation
 - D. Price competition
6. The kinked demand curve theory assumes that
- A. Firms engage in price fixing
 - B. Rival firms will not react to a fall in price
 - C. Rival firms do not follow if price is increased
 - D. Firms compete mainly on price competition
7. A weakness of the kinked demand curve theory is that it fails to
- A. Identify how the initial price was determined
 - B. Explain price rigidity in oligopolistic markets
 - C. Show the different price elasticities of demand following a change in price
 - D. Demonstrate the asymmetric behaviour of oligopolistic firms
8. What is the name given to the practise of a price fixing and/or quantity fixing agreement under an oligopoly?
- A. Cartel
 - B. Collusion
 - C. Game theory
 - D. Price rigidity
9. In game theory, it is assumed that firms
- A. Compete on non-price competition
 - B. Consider the actions of competitors before deciding on their strategy
 - C. Collude as a cartel to maximise their profits
 - D. Act independently of rival firms

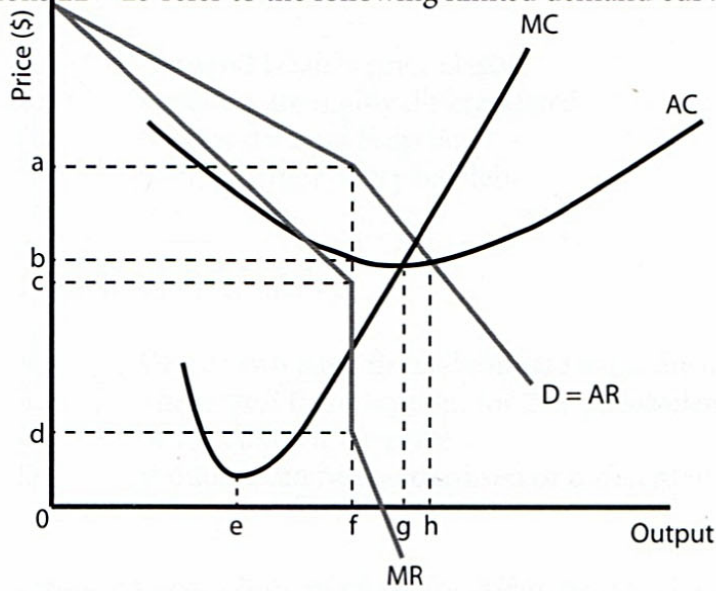
10. Collusion in a market or industry is most likely to be successful when
- A. Demand is fairly price elastic
 - B. Products are highly differentiated
 - C. Market demand is cyclical
 - D. There are high entry barriers
11. In an oligopolistic market
- A. One or two large firms dominate the industry
 - B. The largest firms account for 25 per cent or more market share
 - C. Firms compete on price
 - D. Products can be standardised or differentiated
12. Firms in oligopolistic markets are said to be interdependent because
- A. The products of competitors are homogeneous
 - B. The products of firms in an oligopoly are differentiated
 - C. Firms engage in price competition
 - D. A small number of firms produce a large proportion of the output in the industry
13. Which of the industries below is most likely to be oligopolistic?
- A. Commercial banking
 - B. Men's clothing
 - C. Fruit and vegetable vendors
 - D. Florists
14. If industries X and Y both have a four-firm concentration ratio of 75%, but the Herfindahl index for industry X is 1,000 and in industry Y is 1,200, it can be deduced that there is
- A. Greater market power in industry X than in industry Y
 - B. Greater market power in industry Y than in industry X
 - C. Greater competitiveness in industry Y than in industry X
 - D. Greater efficiency in industry X than in industry Y
15. If four firms in an industry each have 25% market share, the value of the Herfindahl Index is
- A. 625
 - B. 1,000
 - C. 2,500
 - D. 4,000

Questions 16 – 17 refer to the data below.

<u>Firm</u>	<u>Market share (%)</u>
V	30
W	20
X	25
Y	10
Z	15

16. The four-firm concentration ratio for the above industry is
- A. 100 per cent
 - B. 90 per cent
 - C. 85 per cent
 - D. 20 per cent
17. The Herfindahl Index for the above industry is
- A. 1,000
 - B. 2,025
 - C. 2,150
 - D. 2,250
18. The kinked-demand curve theory assumes that
- A. Competitors will match both a price cut and a price increase
 - B. Competitors will follow a price cut but will overlook a price increase
 - C. There is asymmetric information in an oligopoly
 - D. There is collusion in an oligopoly
19. The kinked-demand curve diagram portrays
- A. Price competition under an oligopoly
 - B. Collusive oligopoly
 - C. Non-collusive oligopoly
 - D. Game theory under an oligopoly
20. The primary goal of a cartel is to
- A. Minimise competition between member firms of the cartel
 - B. Intensify competition in oligopolistic markets
 - C. Enjoy supernormal profits
 - D. Eliminate cheating in oligopolistic markets
21. A cartel is more likely to succeed if
- A. Firms sell a differentiated product
 - B. The cost and revenue curves of rivals are very similar
 - C. There are a large number of competing firms involved
 - D. The price elasticity of demand is high

Questions 22 – 25 refer to the following kinked demand curve diagram:



22. Equilibrium output for the oligopolist is at
- $0e$
 - $0f$
 - $0g$
 - $0h$
23. The price charged by the profit maximising oligopolist would be
- $0a$
 - $0b$
 - $0c$
 - $0d$
24. The per unit profit made by the profit maximising oligopolist is
- ab
 - bc
 - cd
 - ac
25. Price rigidity is shown by the price range
- ab
 - bc
 - cd
 - ac

Chapter 17

Theory of the firm – Price discrimination (HL only)

Task 1 – Complete the missing words...

..... occurs when the same product is sold at different prices to different customers, e.g. student tickets compared to adult fares for cinemas, theatres, airlines, theme parks and public transport. This occurs despite there being no differences in the cost of providing the product to the different groups of consumers. By contrast, occurs when different prices are charged for the same product due to different costs of production, e.g. a can of Coca-Cola from 7-Eleven compared to the same drink sold in an expensive hotel. Three conditions are necessary for effective price discrimination:

1. The supplier must be a price-....., i.e. it must have some degree of power.
2. There must be different groups of buyers with different of (PED) for the product, i.e. different groups of customers have different willingness to pay for the product.
3. There must be a of the market, i.e. price discrimination only works if the supplier can prevent one group of customers reselling the product to other groups of customers.

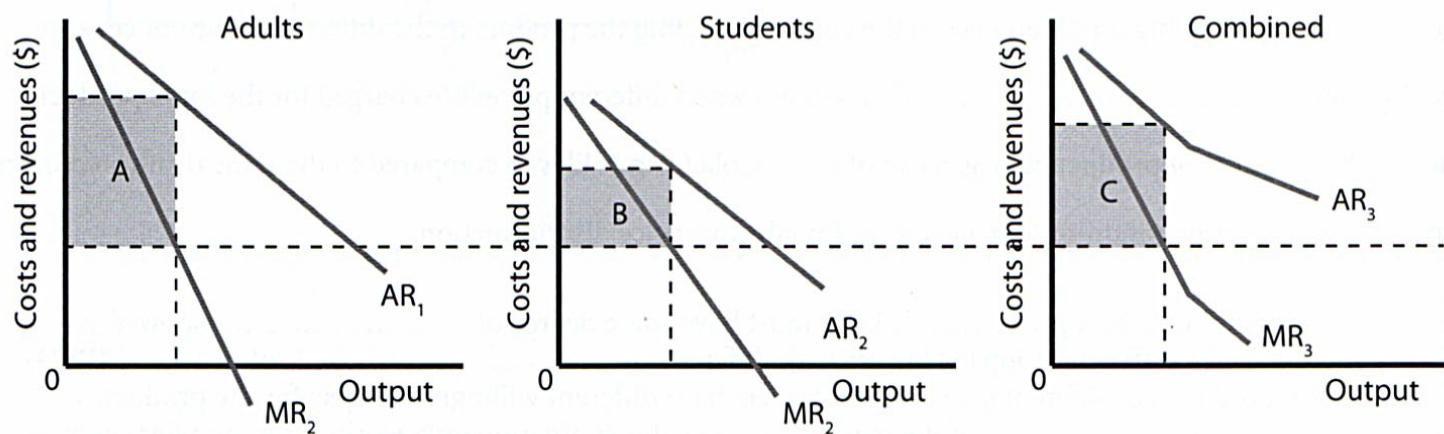
There are three categories of price discrimination:

..... degree price differentiation, also known as perfect price discrimination, occurs when a firm gets the individual consumer to pay the maximum price that s/he is willing and able to pay for that product. Hence, the firm earns the highest possible profits by eliminating any consumer surplus. Examples include second-hand car dealerships, painter and decorators and lawyers who all try to remove consumer surplus as far as possible.

..... degree price differentiation occurs due to the quantity sold (rather than based on differentiating between consumer demographics or income levels). Customers who buy in larger quantities (bulk buyers) enjoy larger price discounts. For example, customers who buy 'multipacks' in supermarkets pay a lower unit price. This discriminates against those who purchase in smaller units, such as those who live alone, old-age pensioners and university students. Utilities companies such as water suppliers also tend to use this form of price discrimination.

..... degree price discrimination, the most common form of price discrimination, occurs when a different price is charged to different customer segments due to their varying degrees of elasticity of demand. Providers of public transport services, airline carriers and hotels often use this form of pricing for peak and off-

peak travel. This form of price discrimination requires the firm to be able to separate the customer segments and to be able to prevent one customer segment from reselling to another segment. It is also easier to achieve if the marginal cost of output is For example, cinemas charge adults higher prices than students, children and pensioners (who have a price elasticity of demand). This helps the cinema to gain revenue from customers who might not be able or willing to buy tickets at the standard rate. In the diagram below, adults have a PED for movie tickets than students so the cinema can gain a greater surplus by using price discrimination (shown by the shaded areas A and B) – which is larger than the surplus if the cinema combined the markets by charging a single price (shown by shaded area C):



Task 2 – Explain why...

a. First class air travel is not a clear example of price discrimination.

.....

b. Two examples of how theme parks such as Disneyland and SeaWorld® use price discrimination.

.....

Task 4 - True or False?

	True / False
a. Firms must have some degree of market power to use price discrimination.	
b. Price discrimination results in consumers with relatively price elastic demand to purchase more than if a single price is charged to all consumers.	
c. Buyers charged different prices must be physically separated for price discrimination to succeed.	
d. Price discrimination is anti-competitive so banned in many parts of the world.	

e.	Industrial customers that are able to purchase huge quantities enjoy the benefits of second degree price discrimination.	
f.	The ability to earn economies of scale is essential for firms to enforce price discrimination.	
g.	Third degree price discrimination focuses on customer segments or consumer groups, rather than on the quantity they buy.	
h.	First degree price discrimination eliminates consumer surplus by charging each customer a different price.	
i.	Consumers cannot benefit from price discrimination.	
j.	A firm that is able to use first degree price discrimination supplies output at the level where Price = Marginal Cost.	

Task 5 – Multiple Choice

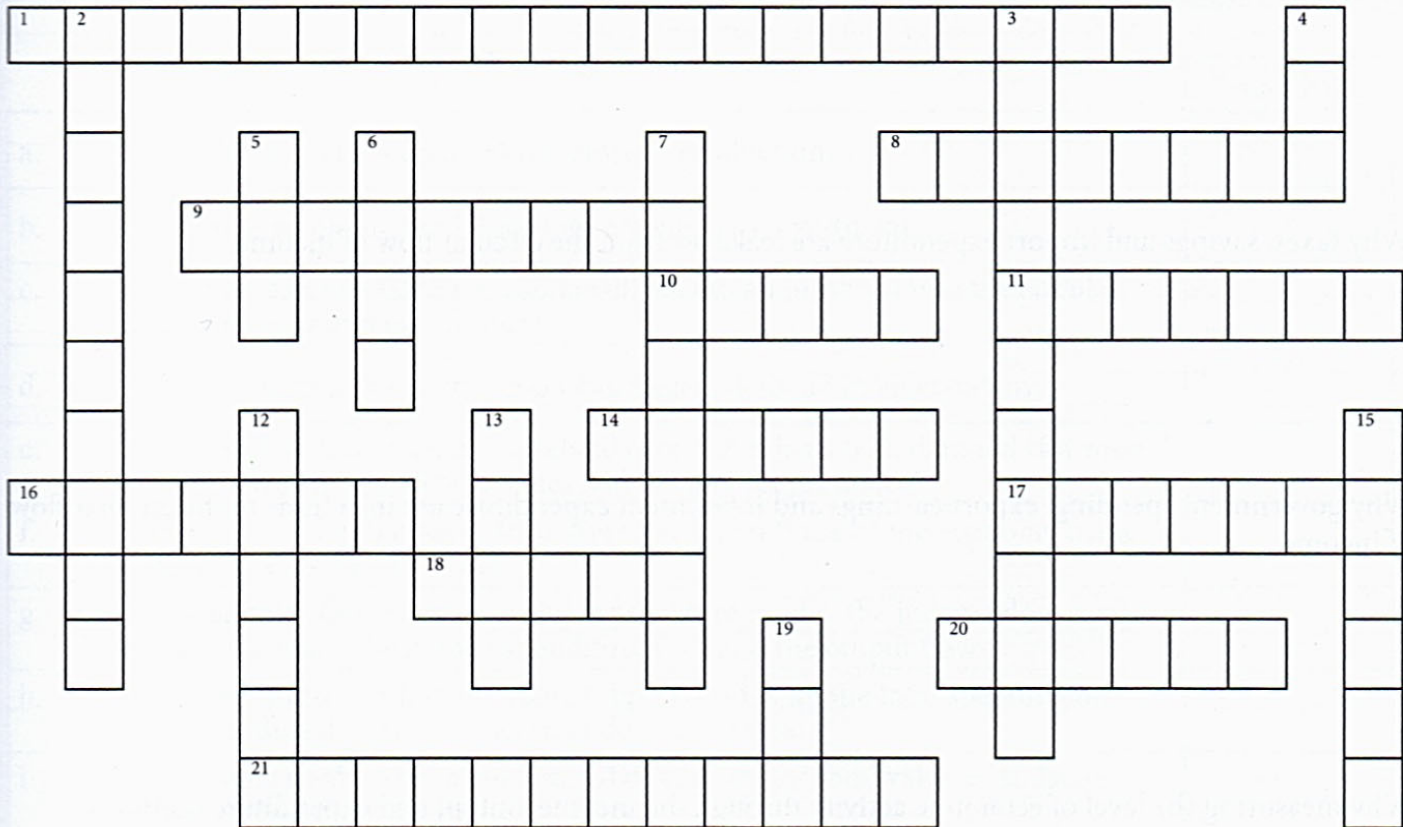
- Real estate agents who earn commission based on the price of the property they sell are likely to use which pricing strategy?
 - First degree price discrimination
 - Second degree price discrimination
 - Third degree price discrimination
 - Price differentiation
- Which of the following applies to first degree price discrimination?
 - A single price is charged to all of customers
 - Price is based on the maximum amount that individuals are willing to pay
 - Different prices are charged depending on how frequently the customer makes a purchase
 - Different prices are charged to different customer groups
- Which statement best describes second degree price discrimination?
 - Different buyers with different demand elasticities that purchase different quantities of a product
 - Different types of buyers with different demand elasticities due to time, such as peak travel
 - Price discrimination caused by differences in ability and willingness to pay
 - Providing customers with a free product, although the paid-for version is far more superior
- Which of the following is not an example of second degree price discrimination?
 - “Buy two, get one free” special deals at supermarkets
 - Customer loyalty and rewards programmes at book retailers
 - Frequent flyer mileage loyalty schemes from airlines
 - ‘Happy hour’ discounts at bars and restaurants
- Which of the following is not an example of third degree price discrimination?
 - Child and adult fares on airlines
 - Family tickets at theme parks
 - Early bird discounts at restaurants
 - Peak and off-peak airline travel

6. Which statement best describes third degree price discrimination?
- Different buyers with different demand elasticities paying different prices
 - Higher prices being charged to consumers with higher elasticity of demand
 - Different prices being charged to different consumers due to differences in ability and willingness to pay
 - Charging customers with a preferential price to encourage consumption
7. Which statement does not explain why consumers can benefit from price discrimination?
- Firms increase output to lower-income households
 - The welfare loss associated with monopolies is reduced
 - Greater economies of scale can be enjoyed
 - Competitive markets are more efficient than monopolist ones
8. If a firm charges customers \$100 for the first unit purchased, and \$90 for each additional unit purchased, this pricing strategy is known as
- First degree price discrimination
 - Second degree price discrimination
 - Third degree price discrimination
 - Revenue maximization
9. If the price elasticity of demand for a product in consumer market A is -0.5 and in consumer market B is -1.2, a price discriminating firm will charge
- A higher price in market A
 - A higher price in market B
 - The same price in both markets
 - A lower price in market A than in market B
10. Which of the following conditions applies to a profit maximising firm that uses third-degree price discrimination in two consumer markets (market A and market B)?
- $MR_A = MR_B$
 - $MR_A = MR_B = MC$
 - $P_A = P_B = MC$
 - $P_A = P_B = MR_A = MR_B$

Chapter 18

Economic activity

Task 1 – Crossword: Economic Activity ...



Clues across

- Basic model that shows the relationship between households and firms in terms of provision of factor inputs, production and consumption (8, 4, 2, 8).
- Index of economic growth that factors in environmental destruction (5,3).
- These represent a boost to the circular flow of income, e.g. increased government spending (9).
- Withdrawals, imposed by the government, from the circular flow of income (5).
- A type of injection to the circular flow of income, these represent earnings from overseas clients (7).
- The return to the factor of production known as enterprise (6).
- Also known as 'withdrawal', this is a drain on income and expenditure from the circular flow (7).
- The 'money' or 'face' value of gross domestic product that does not take inflation into account (7).
- The return to the factor of production known as labour (5).
- A kind of withdrawal which appears when an open economy is considered in the circular flow (6).
- Used to measure a country's standard of living, this divides GDP by the population (3, 3, 6).

Clues down

- Business expenditure that boosts the productive capacity of the economy; a type of injection into the economy (10).
- An economic system that caters for foreign trade rather than being self-sufficient (4, 7).
- Abbreviation for the value of the annual output of an economy (3).
- Abbreviation for the value of all output of an economy (3).
- The return to the factor of production known as land (4).
- The return to the factor of production known as capital (8).
- A type of withdrawal which appears when the financial sector is added in the circular flow (6).
- The actual value of gross domestic product that does take into account rates of inflation (4).
- A very basic economic system that is self-sufficient with just households and firms (6).
- Similar measure of economic activity to GNP, this measure deducts indirect business taxes (3).

a. The difference between Gross National Income (GNI) and Gross National Product (GNP).

b. How national income statistics are an indication of standards of living.

c. Why taxes, savings and import expenditure are leakages from the circular flow of income.

d. Why government spending, export earnings and investment expenditure are injections to the circular flow of income.

e. Why measuring the level of economic activity through the income, output and expenditure methods should give the same numerical result.

f. Why there is a need to be cautious about using national income statistics as an indicator of standards of living over time or between different countries.

g. Using a diagram, the circular flow of income in an open economy with a government sector and financial market, making explicit references to leakages and injections.

Task 3 – True or False? 📌📌

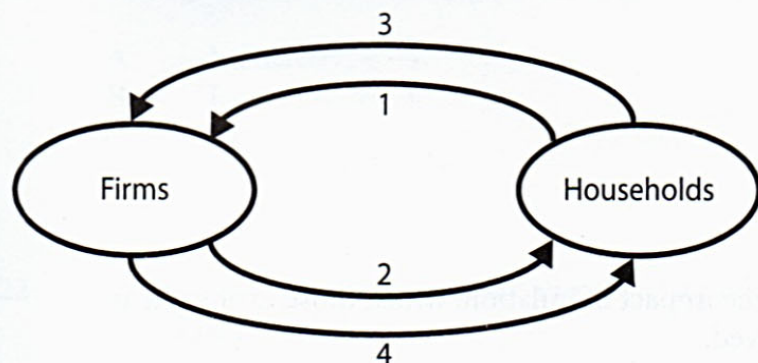
	True / False
a. Income is the return on all four factors of production.	
b. In a closed economy model, savings are equal to investment.	
c. An increase in real GDP per capita will lead to an injection into the circular flow of income and expenditure.	
d. Injections help to boost the level of aggregate demand in an economy.	
e. In the circular flow model, households are individuals with demand (for products) whereas firms are businesses with supply (of products)	
f. Real GDP can be calculated from the total expenditure of the economy using data for $C + I + G + (X - M)$.	
g. In the circular flow of income and expenditure model, the income flow is numerically equal to both the expenditure flow and the output flow.	
h. The expenditure method of calculating GDP adds up the total spending on newly produced goods and services during the year.	
i. The income method of calculating GDP adds up the total value of all factor incomes earned during the year.	
j. A GDP deflator is used to convert GDP at current prices to GDP at constant prices.	
k. The circular flow of income model is a macroeconomic model of economic activity which attempts to explain how national income is determined.	

Task 4 – Multiple Choice ☑

- The collective term for the returns on the four factors of production is
 - Income
 - Wages and salaries
 - Gross domestic product
 - Earnings
- Which of the following is not a leakage from the circular flow of income?
 - Savings
 - Taxation
 - Imports
 - Investment expenditure

3. The difference between total GDP or GNP and per capita GDP or GNP as measures of national output is that
- A. Per capita GDP and per capita GNP account for changes in inflation over time
 - B. Total GDP and total GNP account for changes in inflation over time
 - C. Per capita GDP and per capita GNP account for the size of the population
 - D. Total GDP and total GNP account for the size of the population
4. Which of the following is not an injection into the circular flow of income?
- A. Government spending
 - B. Export earnings
 - C. Investment
 - D. Tax revenues
5. Which option below is not used to measure the GDP of a country?
- A. National Output
 - B. National Income
 - C. National Expenditure
 - D. Net national income from abroad
6. An increase in real national income is likely to lead to
- A. Increased exports earnings
 - B. Increased consumption of imported products
 - C. A fall in savings
 - D. An increase in government expenditure
7. Investment is most likely to rise when there is a fall in
- A. Interest rates
 - B. Gross national income
 - C. Leakages
 - D. The marginal propensity to import
8. Which statement explains the difference between nominal GDP and real GDP?
- A. Nominal GDP is measured in current market prices while real GDP takes account of fluctuations in prices over time
 - B. Real GDP is measured in current market prices while nominal GDP takes account of fluctuations in prices over time
 - C. GDP accounts for net property income from abroad
 - D. GNP accounts for net property income from abroad

Questions 9 – 10 refer to the diagram below for a closed economy



9. Arrows 1 and 2 represent
- Goods and services; factor incomes
 - Factor resources; factor incomes
 - Factor incomes; expenditure
 - Expenditure; national output
10. Arrows 3 and 4 represent
- Goods and services; factor incomes
 - Household expenditure; goods and services
 - Household expenditures; factor income
 - Factor resources; national output
11. Which of the following is not used to measure the level of economic activity?
- Total level of expenditure on goods and services being produced by firms
 - The sum of investment (I), government expenditure (G) and net export spending (X – M)
 - Total level of income generated from all factor incomes (wages, profit, interest and rent)
 - The value of total output produced by firms in the economy
12. Which of the following is not a difficulty when trying to calculate an accurate value to the level of economic activity?
- Trade within the unofficial (informal) economy
 - Non-marketed goods and services such as voluntary work
 - Government spending on public sector pay
 - Fluctuating foreign exchange rates
13. The difference between gross domestic product (GDP) and gross national product (GNP) is that
- GDP measures the flow of output produced within the country
 - GNP measures the flow of output produced within the country
 - GDP adds property income from investments abroad
 - GNP includes a deflator to account for inflation over time

14. Which term describes national income statistics expressed at the same value as money was worth at the time the data was recorded?
- A. Real GDP
 - B. Nominal GDP
 - C. GDP deflator
 - D. Per capita GDP
15. GDP figures expressed as prices include the impact of inflation, whilst those expressed as prices have the effect of inflation removed.
- A. current, constant
 - B. constant, current
 - C. real, nominal
 - D. real, constant
16. Households provide to firms, to produce goods and services, in return for
- A. factors of production; factor incomes
 - B. factor incomes; factor inputs
 - C. expenditure; goods and services
 - D. goods and services; expenditure
17. In the simplest two-sector closed model of the circular flow of income, it is assumed that
- A. Households spend all their income on the goods and services produced by firms
 - B. Income consists of savings and consumption
 - C. Expenditure consists of savings and consumption
 - D. Firms spend all their money on factors of production and investment
18. Which of the following increase the level of economic activity in the economy?
- A. Savings and Investment
 - B. Expenditure on imports
 - C. Exports and Government spending
 - D. Factors of production
19. Which of the following does not apply to an open economy with a government sector in the circular flow of income model?
- A. There is foreign trade
 - B. There are three types withdrawals and three types of injections
 - C. The following condition holds: $S + T + M = G + I + X$
 - D. The following condition holds: $S = I$
20. The level of economic activity will depend on the relative size of
- A. Withdrawals and injections
 - B. Exports and imports
 - C. Income
 - D. Expenditure

21. If nominal income increases by an average of 6% whilst the general price level increases by 4%, the average person's real income will have (*HL Only*)
- Increased by 6%
 - Increased by 2%
 - Fallen by 2%
 - Fallen by 4%
22. In an economy with an average annual salary of \$24,000 and a price index of 128, the average real income would be (*HL Only*)
- \$6,720
 - \$17,280
 - \$18,750
 - \$30,720
23. Calculate the value of gross domestic product from the give information: Consumption = \$150bn, Investment expenditure = \$50bn, Government spending = \$80bn, Export earnings = \$10bn, and Import expenditures = \$9bn. (*HL Only*)
- \$280bn
 - \$281bn
 - \$290bn
 - \$299bn
24. Calculate the value of gross national product from the give information: Consumption = \$80bn, Investment expenditure = \$10bn, Government spending = \$30bn, Export earnings = \$8bn, Import expenditures = \$9bn, Income earned abroad = \$7bn and Income paid abroad = \$5bn. (*HL Only*)
- \$119bn
 - \$121bn
 - \$126bn
 - \$128bn
25. Given the data below, what is the real GDP in 2012? (*HL Only*)

Year	Nominal GDP (\$bn)	GDP deflator
2011	128.0	105.0
2012	130.2	106.8
2013	132.4	109.6

- \$106.80bn
- \$121.90bn
- \$121.91bn
- \$130.20bn

Chapter 19

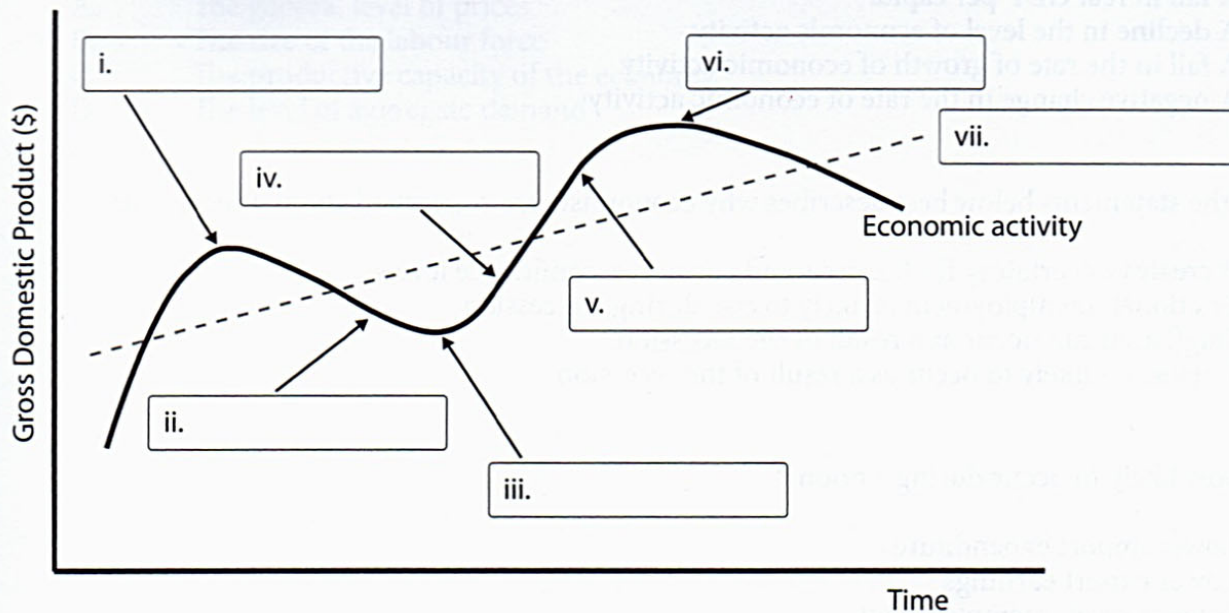
The business cycle

Task 1 – Complete the missing words...✍

Economic growth occurs when there is an increase in a country's level of economic activity over time. It is measured by the change in total output of an economy per year, known as the p..... (GDP). Higher rates of economic growth suggest that the economy is more prosperous and therefore the average person is earning more income. The pattern of fluctuations in economic growth is known as the cycle (or trade cycle). The various key phases in the trade cycle are:

- **Boom** – here, the level of economic activity rises, with (C), (I) and export earnings (X) all increasing. At the peak, economic activity is at its highest level. Unemployment will be low whilst consumer and business confidence levels will be high. As firms earn higher levels of profit, people are likely to receive pay rises.
- **Recession** – at this stage in the cycle, there is a fall in GDP. Technically, a recession occurs when GDP falls for consecutive quarters. Features of a recession include declining consumption, lower investment, falling export sales and rising unemployment. Firms most likely to suffer in a recession are those that sell elastic products, such as houses, cars, jewellery and overseas holidays.
- **Slump (or trough)** – this is the bottom of a recession in the trade cycle, with high u..... alongside very low levels of consumer spending, investment and export earnings. Many firms will have already closed down and consumers have little confidence in the economy.
- **Recovery (or growth)** occurs when the level of GDP starts to rise again, after the economy has experienced a slump. Since national income begins to increase again, the level of consumption, investment, exports and employment will all gradually rise. Technically, occurs when the level of economic activity is growing but below the long term trend, and (or **expansion**) occurs when economic activity is above the trend.

Identify the missing labels in the diagram below:



Task 2 - True or False? 🙋 🙋

	True / False
a. When the real rate of GDP falls (i.e. economic activity declines), the economy is said to be in a recession.	
b. During an economic boom, unemployment is below its natural rate, whereas during a recession the actual unemployment rate is above its natural rate.	
c. A recession occurs when there is negative growth in economic activity for two consecutive quarters.	
d. If an economy grew by 2.5% last year and the rate of growth falls to 1.2% this year, the level of economic activity has declined.	
e. Business cycles are extremely regular and their durations are predictable.	
f. All economies face a business cycle.	
g. Counter-cyclical businesses - such as fast food restaurants, pawnbrokers and discount stores - tend to do well or survive during a recession.	
h. The level of business confidence is a key determinant of investment expenditure.	

Task 3 - Multiple Choice

- The potential gross domestic product (GDP) of an economy is shown by
 - The level of GDP above the trend line of the business cycle
 - The long term trend of the business cycle
 - The sum of $C + I + G + (X - M)$
 - An increase in real GDP above the trend line for economic activity

2. A recession occurs when, over a six months period, there is
- A fall in real GDP per capita
 - A decline in the level of economic activity
 - A fall in the rate of growth of economic activity
 - A negative change in the rate of economic activity
3. Which of the statements below best describes why economists are concerned about a recession?
- It creates uncertainty for business and consumer confidence levels
 - Frictional unemployment is likely to rise during a recession
 - Stagflation can occur as a result of the recession
 - Inflation is likely to occur as a result of the recession
4. What is most likely to occur during a boom?
- Lower import expenditure
 - Lower export earnings
 - Lower rate of unemployment
 - Lower aggregate demand
5. Potential growth is measured by
- Historic growth rates of the economy
 - Extrapolated growth rates of the economy
 - The present growth rate of the economy
 - The projected growth rate if resources are fully and efficiently employed
6. Which statement best outlines the difference between a fall in GDP and a fall in GDP growth
- A fall in GDP results in a recession whereas a fall in GDP growth means the economy is still growing
 - A fall in GDP growth results in a recession whereas a fall in GDP means the economy is still growing
 - GDP per capita is relatively higher with a fall in GDP
 - GDP per capita is relatively higher with a fall in GDP growth
7. What happens when an economy first experiences declining economic activity?
- GDP rises
 - Inflation rises
 - Investment increases
 - Unemployment rises
8. Economic recovery is not associated with an increase in
- Prices
 - Aggregate demand
 - Potential growth
 - Business confidence levels
9. Exogenous shocks that affect the potential growth of an economy do not include
- Global financial crisis
 - Outbreak of infectious diseases
 - Natural disasters such as earthquakes, tsunamis and flooding
 - Diseconomies of scale in production

10. The immediate determinant of the level of output and employment in an economy is

- A. The general level of prices
- B. The size of the labour force
- C. The productive capacity of the economy
- D. The level of aggregate demand

Chapter 20

Aggregate Demand

Task 1 – Vocabulary Quiz

Identify the correct key term from the clues below:

Key term	Definition
	This measures the total spending on goods and services from households in the domestic economy, per period of time.
	This is income after tax and other compulsory deductions have been accounted for, i.e. the actual income that individuals are able to spend.
	This measures the government's total expenditure on goods and services, including its investment spending.
	This refers to the capital expenditure of firms in the economy which, over time, boosts its productive capacity.
	Given by the formula $X - M$, this component of aggregate demand measures the balance of export earnings from import expenditure.

Task 2 – Explain...

a. The equation for aggregate demand: $AD = C + I + G + (X - M)$.

b. Why the aggregate demand curve has a negative slope.

c. How higher interest rates can affect all components of aggregate demand, i.e. $C + I + G + (X - M)$.

d. Three factors that affect the level of investment expenditure in an economy.

e. Three factors that can shift the aggregate demand curve.

Task 3 - True or False?

	True / False
a. Interest rates are a key component of aggregate demand.	
b. Consumption is the largest component of aggregate demand.	
c. Ceteris paribus, an increase in interest rates will increase the demand for money and decrease consumption and investment expenditure.	
d. An increase in aggregate demand will tend to cause price levels to rise.	
e. Aggregate demand refers to the output of goods and services, rather than the actual level of demand for goods and services in the economy.	
f. Spending on national security is an example of investment expenditure.	
g. Spending on domestic holidays by local citizens is an example of consumer expenditure.	
h. Gross domestic product differs from aggregate demand in that the former is actual expenditure whereas the latter is planned (or expected) expenditure.	
i. An increase in household indebtedness due to higher interest rates will shift the aggregate demand curve to the left, ceteris paribus.	
j. The average propensity to save (APS) shows the change in savings following a change in the level of national income.	

Task 4 - Multiple Choice

- The aggregate demand curve shows the
 - Negative correlation between production costs and real national output
 - Positive correlation between national output and the general price level
 - Nominal national output that is purchased at each price level, per time period
 - Real national output that is purchased at each price level, per time period
- A change in any of the determinants of aggregate demand will
 - Increase the price elasticity of aggregate demand curve
 - Shift the aggregate demand curve
 - Cause prices to increase
 - Cause a movement along the aggregate demand curve
- What is likely to happen to the UK economy if the majority of its trading partners in the European Union were to experience an increase in economic activity?
 - Its aggregate demand curve would shift to the right
 - Its aggregate demand curve would shift to the left
 - Its aggregate supply curve would shift to the left
 - Its aggregate supply curve would shift to the right

4. Which of the below events would not shift the aggregate demand curve?
 - A. A fall in the value of the currency
 - B. An increase in income tax rates
 - C. A change in the general price level
 - D. Higher interest rates

5. A reduction in interest rates will not tend to
 - A. Expand investment expenditure
 - B. Shift the aggregate demand curve to the right
 - C. Discourage consumption expenditure
 - D. Cause a rise in the exchange rate

6. An economy's aggregate demand measures
 - A. The total quantity of goods and services demanded in the economy
 - B. The total quantity of goods and services produced in the economy
 - C. The total value of all goods and services demanded in the economy
 - D. The total value of all producer and consumer surplus in the economy

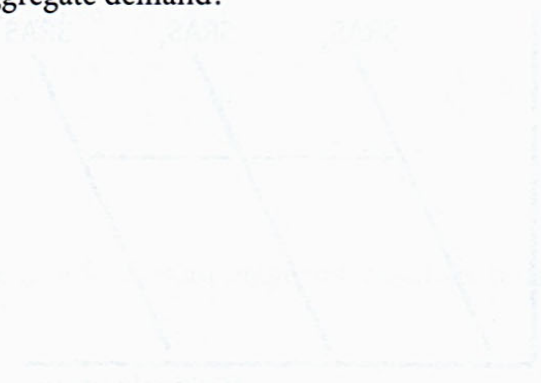
7. When the general level of prices is high, the level of aggregate demand tends to be
 - A. High
 - B. Low
 - C. Unchanged
 - D. Stable

8. Spending on public road networks in an economy is an example of
 - A. Investment expenditure
 - B. Consumption expenditure
 - C. Government spending
 - D. Net exports

9. The construction of new residential housing is an example of
 - A. Investment expenditure
 - B. Consumption expenditure
 - C. Government spending
 - D. Net exports

10. Ceteris paribus, what will happen to net exports when the real exchange rate decreases?
 - A. Net exports are unaffected in the long run
 - B. Net exports will fall
 - C. Net exports will increase
 - D. Net exports will go into deficit

11. When the aggregate demand curve for an economy shifts rightwards
- A. National output increases at all price levels
 - B. Net exports rise
 - C. Inflation will occur
 - D. Interest rates get raised
12. Ceteris paribus, when disposable incomes fall
- A. Consumption expenditure falls
 - B. Investment expenditure falls
 - C. Aggregate demand shifts rightwards
 - D. Deflation occurs
13. Ceteris paribus, what will happen to aggregate demand if the marginal propensity to consume rises?
- A. It contracts
 - B. It expands
 - C. It shifts to the left
 - D. It shifts to the right
14. What is most likely to rise following a contraction in aggregate demand?
- A. Consumption expenditure
 - B. Investment expenditure
 - C. Government spending
 - D. Net exports
15. Consumption is not a function of
- A. Household income
 - B. Real interest rates
 - C. The average propensity to consume
 - D. Business confidence levels



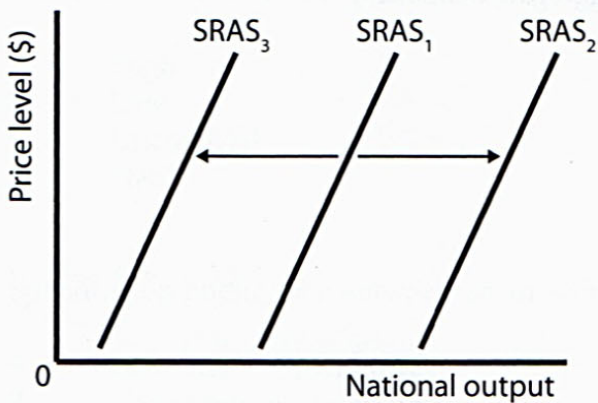
Chapter 21

Aggregate Supply

Task 1 – Complete the missing words...

The aggregate supply (AS) curve shows the various amounts of real output that firms are willing and able to produce at each price level. It is a measure of an economy's potential output. In the run, the AS curve is vertical, whereas in the run it is upward sloping.

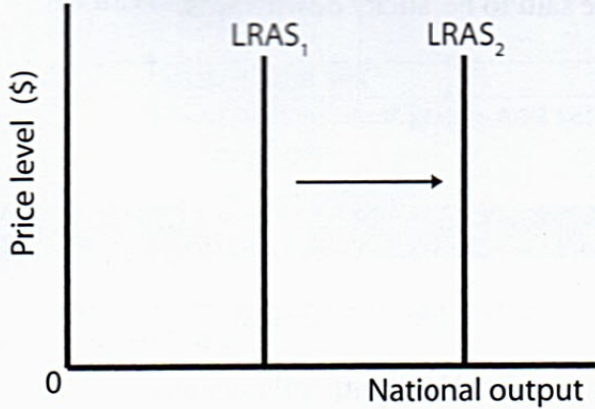
The short run aggregate supply (SRAS) shows total planned output in the economy at different price levels, holding other factors constant. In reality, a change in one of these factors, such as wage rates or the state of technology, will the SRAS curve:



Unfavourable changes in non-price factors that affect aggregate supply will shift the SRAS curve from $SRAS_1$ to Favourable changes shift the SRAS curve from $SRAS_1$ to

The slope of SRAS curve depends on the degree of spare capacity within the economy (the steeper the SRAS curve, the the degree of underutilised resources). For example, as national output expands and the economy heads towards its productive capacity, supply bottlenecks start to appear, i.e. SRAS becomes more price inelastic.

In the long run, the aggregate supply is independent of the price level as this represents the maximum level of output that the economy can produce. Hence, the LRAS curve is and is dependent of non-price variables such as the state of technology or the quantity and quality of factors of production. This means that a volume of national output can be produced at any given price level.



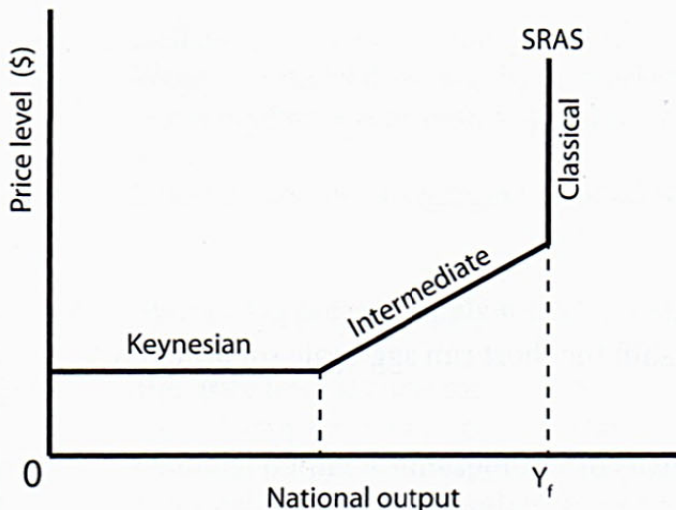
A favourable change in the productive capacity of an economy (e.g. technology advances or the discovery of oil) will shift the LRAS curve to the right.

Task 2 – Explain...

a. Three factors that affect the productive capacity of an economy.

b. Two factors that can shift the short run aggregate supply curve.

c. The three parts to the Keynesian aggregate supply curve (the Keynesian range, intermediate range and the Classical range) in the diagram below:



d. Why, according to the monetarists/classical economists, the long run aggregate supply curve is vertical.

e. Why in the Keynesian model of aggregate supply wages are said to be 'sticky downwards'?

Task 3 - True or False? 🍷🍷

	True / False
a. An increase in productivity will shift the aggregate supply curve to the right, ceteris paribus.	
b. When nominal wages rise in response to an increase in the general price level, the short run aggregate supply curve shifts to the left, ceteris paribus.	
c. A contraction occurs when real national income falls along a given long run aggregate supply curve, with the general level of prices falling.	
d. The long run aggregate supply curve for an economy is vertical.	
e. The short run aggregate supply curve is upwards sloping because higher price levels create incentives for firms to expand output.	
f. Average costs of production fall as an economy moves towards and beyond its full-employment level of output.	
g. An increase in business taxes will tend to shift the SRAS curve to the right.	
h. Supply shocks, such as adverse weather conditions and natural disasters, can cause the aggregate supply curve to shift inwards.	
i. The long run aggregate supply of an economy is independent of the price level.	
j. An increase in the minimum wage of an economy is likely to shift the SRAS curve to the right.	

Task 4 – Multiple Choice ☑

- The short run aggregate supply curve is
 - Horizontal
 - Vertical
 - Upwards sloping from left to right
 - Steeper during periods of unemployment
- A change in which of the following factors will not shift the short run aggregate supply curve?
 - Unit labour costs
 - Commodity prices
 - Government taxation and subsidies
 - Education and training reforms
- Which of the following would shift the aggregate supply curve to the left?
 - Increased labour productivity
 - Higher prices of imported resources
 - A fall in the prices of raw materials
 - Lower interest rates

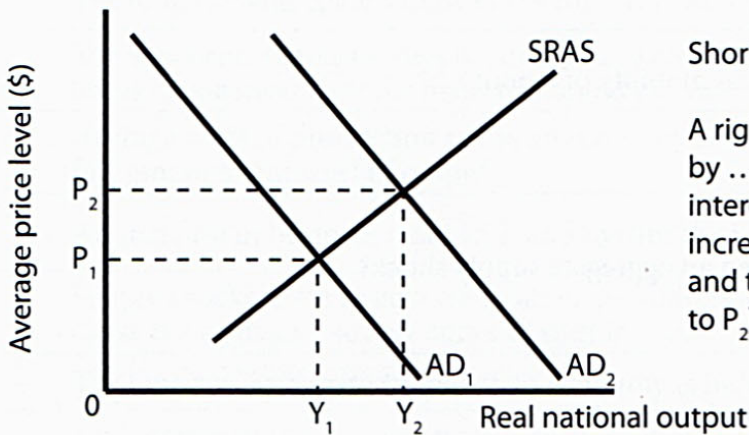
4. An increase in which of the following would shift the aggregate supply curve to the right?
- A. Corporation tax
 - B. Prices of imported goods and services
 - C. Exchange rate
 - D. Labour productivity
5. The long run aggregate supply curve is not a function of
- A. The quantity and quality of labour input to the production process
 - B. The quantity and quality of natural resources production
 - C. The available capital stock such as buildings and infrastructure
 - D. The inflation rate of the economy
6. The long run aggregate supply curve of an economy is least likely to be affected by a change in
- A. Domestic inflation rates
 - B. Improved occupational and geographical mobility of labour
 - C. Aggregate supply shocks
 - D. Economic efficiency gains
7. Which of the following would not be considered an aggregate supply shock?
- A. External diseconomies of scale
 - B. Discovery of huge oil supplies
 - C. Natural disasters such as earthquakes and tsunamis
 - D. Introduction of new technological processes
8. According to Keynesian economists, for any given short run aggregate supply curve, a fall in aggregate demand does not cause a fall in the general level of prices because
- A. Deflation is harmful to the economy
 - B. Wages are sticky downwards, i.e. workers are not receptive of a cut in their pay
 - C. Governments would simply spend their way out of a recession, cancelling out a fall in the price level
 - D. Lower prices mean aggregate demand would rise, thereby restoring the equilibrium price
9. In the Keynesian aggregate supply model, the short run is a period in which
- A. The price level is constant
 - B. The full employment level is constant
 - C. Nominal output is unresponsive to changes in the price level
 - D. Nominal wage rates and other factor resource prices are unresponsive to changes in the price level
10. Ceteris paribus, institutional changes including better infrastructure will help to
- A. Shift the short run aggregate demand curve to the left
 - B. Shift the short run aggregate demand curve to the right
 - C. Shift the long run aggregate supply curve to the right
 - D. Shift the long run aggregate supply curve to the left

Chapter 22

Equilibrium AD-AS

Task 1 – Complete the missing words...

Short run macroeconomic equilibrium is determined by the interaction between aggregate demand (AD) and aggregate supply (AS), thus determining the actual level of real and the average price level:

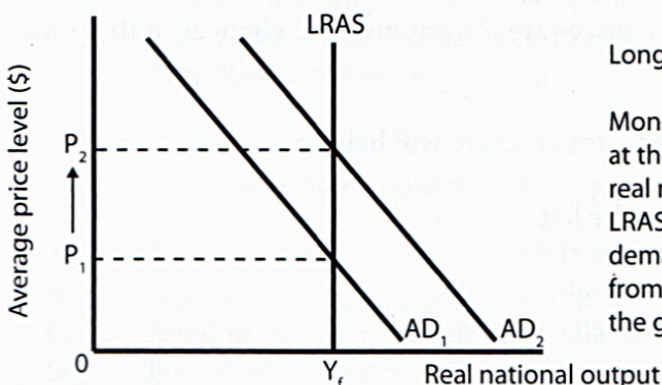


Short run equilibrium – Keynesians

A rightwards shift of AD can be caused by taxes or interest rates in the economy. This will increase national output (from Y_1 to Y_2) and the general level of prices (from P_1 to P_2).

Keynesians argue that wages are 'sticky' downwards, even in a recession, so forces will not restore equilibrium at the full employment level of output. Instead, there is a need for government intervention to restore long run equilibrium through the use of fiscal policy and/or monetary policy.

The employment level of output occurs when there are jobs for all those willing and able to work. Note that this does not equal zero unemployment because there are always some people between jobs (..... unemployment) and others who are not willing to work (..... unemployment), perhaps due to the existence of welfare and unemployment benefits. It represents the lowest unemployment compatible with price stability.

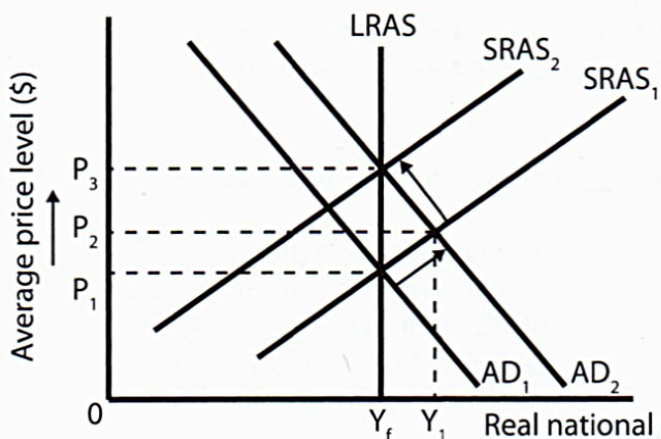


Long run equilibrium – Monetarists

Monetarists argue that long run equilibrium exists at the (full employment at Y_f) level of real national output, i.e. where AD_1 intersects the LRAS curve. Any attempt to increase aggregate demand beyond the capacity of the economy (Y_f), from AD_1 to AD_2 , will only be, with the general price level increasing from P_1 to P_2 .

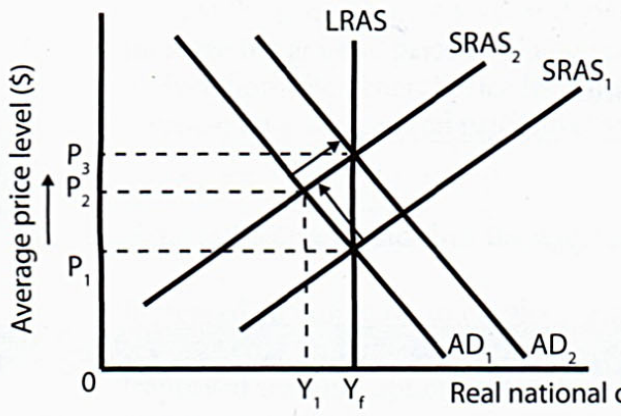
Monetarists (or new classical economists) suggest that any short run equilibrium (below the full employment level of real national output) is only This is because forces will restore equilibrium in the long run. Two examples are shown below:

1. An increase in aggregate demand:



Assume that long run equilibrium is at Y_f (the full employment level) with the general price level at An increase in aggregate demand from AD_1 to AD_2 raises average prices to P_2 , with aggregate supply on the $SRAS_1$ curve. This increases national output temporarily beyond its normal capacity, so wages need to be paid. This costs, so AS shifts to $SRAS_2$, raising prices to P_3 with the economy operating back at Y_f .

2. An increase in costs of production:



Assume that long run equilibrium is at Y_f with the general price level at P_1 . An increase in costs of production, perhaps due to higher wages, forces the SRAS to from $SRAS_1$ to $SRAS_2$, raising average prices to P_2 but the resulting in GDP creates a gap. The government intervenes to boost aggregate demand from AD_1 to AD_2 , raising average prices to P_3 but with the economy operating back at Y_f .

Hence, monetarists believe that -side policies are ineffective in the long run. Instead, they prefer using -side policies to shift the LRAS outwards, thereby achieving the macroeconomic objectives of economic growth and a fall in the average price level.

Task 2 – Explain...

a. With the use of an AD-AS diagram, the impact of an increase in net exports.

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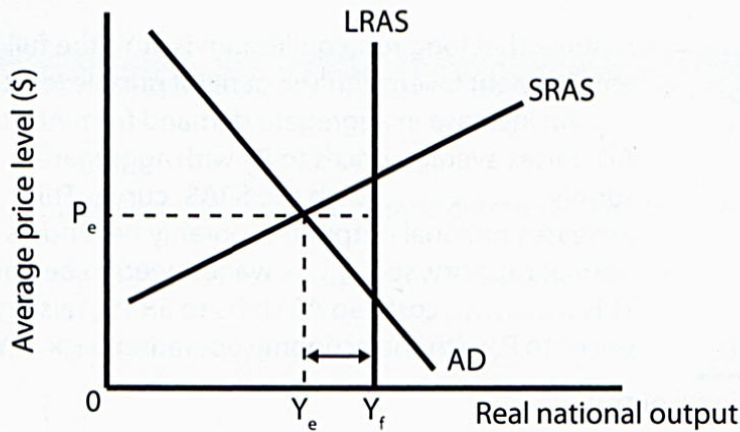
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b. With the use of an AD-AS diagram, the impact of a financial crisis that reduces average share prices by 20%, denting both consumer and producer confidence levels.

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c. Whether the diagram below shows an inflationary or deflationary gap.



d. Why Keynesians argue that wages are 'sticky downwards'.

Task 3 – True or False? 👍 👎

	True / False
a. An increase in the exchange rate will help to boost both aggregate demand and aggregate supply.	
b. An increase in the rate of corporation tax on business profits will shift the aggregate supply curve to the left.	
c. Equilibrium in the economy exists when aggregate demand is equal to aggregate supply.	
d. A recession can be depicted on an AD-AS diagram by a leftward shift of either the aggregate demand curve or the aggregate supply curve.	
e. It is not possible for an economy to simultaneously achieve economic growth, full-employment and price stability.	
f. If the government wishes to maintain full employment under conditions of demand-pull inflation then a deflationary gap is likely to occur.	
g. Full employment occurs when there is zero unemployment in the economy.	
h. An increase in aggregate demand caused by non-price factors is shown in an AD-AS diagram by a rightwards shift of the aggregate demand curve.	
i. According to Keynesians, increases in aggregate demand need not be inflationary if there is spare capacity in the economy.	
j. A reflationary policy is likely to be used by the government when average prices in the economy are falling at an accelerating pace.	

Task 4 – Multiple Choice

1. Ceteris paribus, what will happen following a reduction in both income tax and corporation tax?
 - A. Aggregate demand rises and aggregate supply falls
 - B. Aggregate demand rises and aggregate supply rises
 - C. Aggregate demand falls and aggregate supply falls
 - D. Aggregate demand falls and aggregate supply rises

2. An increase in aggregate demand will have greatest effect on the general level of prices if
 - A. Aggregate supply is price elastic
 - B. Aggregate supply is price inelastic
 - C. Aggregate supply is upwards sloping
 - D. Aggregate demand is price elastic

3. All other things being equal, an outward shift of the aggregate supply will
 - A. Reduce the general price level and increase real national income
 - B. Increase the general price level and reduce real national income
 - C. Reduce both the general price level and real national income
 - D. Increase both the general price level and real national income

4. Which of the following would shift the aggregate supply to the right?
 - A. Increased spending on unemployment benefits
 - B. Increased interest rates
 - C. Improved training opportunities for all employees
 - D. Higher exchange rate

5. What is most likely to happen following an increase in resource productivity?
 - A. Aggregate demand shift right
 - B. Aggregate supply shifts right
 - C. Aggregate demand shift left
 - D. Aggregate supply shift left

Questions 6 – 8 refer to the data below:

Aggregate demand (\$bn)	Price level (index)	Aggregate supply (\$bn)
600	100	300
500	150	350
400	200	400
300	250	450

6. The equilibrium price level (expressed as a price index) is
 - A. 100
 - B. 150
 - C. 200
 - D. 250

7. If the price level is 150, there will be
- A shortage of real national output of \$350bn
 - A shortage of real national output of \$200bn
 - A shortage of real national output of \$150bn
 - A surplus of real national output of \$150bn
8. What would happen to equilibrium if aggregate demanded falls by \$150 at each price level?
- Equilibrium price level falls to 150 and real national output would be \$150bn
 - Equilibrium price level falls to 150 and real national output would be \$350bn
 - Equilibrium price level falls to 100 with a shortage of real national output of \$150bn
 - Equilibrium price level rises to 250 with a surplus of real national output of \$300bn
9. If long run aggregate supply is perfectly inelastic, any increase in aggregate demand will
- Increase national output but not the price level
 - Increase the price level but not national output
 - Raise both national output and the price level
 - Reduce national output and the price level
10. What is most likely to happen following a decline in the prices of imported raw materials?
- Aggregate demand shift right
 - Aggregate supply shifts right
 - Aggregate demand shift left
 - Aggregate supply shift left

Questions 11 – 15 refer to the following table (figures in \$bn):

Price index	Consumption	Investment	Government spending	Exports	Imports	Aggregate supply
128	20	4	5	6	10	53
124	22	6	7	7	9	47
120	24	8	9	8	8	41
116	26	10	11	9	7	35

11. At a price index level of 128, the value of net exports would be
- Deficit of \$10bn
 - Deficit of \$4bn
 - Zero balance
 - Surplus of \$4bn

12. The equilibrium level of real national output will be
- A. \$53 bn
 - B. \$47 bn
 - C. \$41 bn
 - D. \$35 bn
13. At what price level would aggregate demand be \$49 bn?
- A. 128
 - B. 124
 - C. 120
 - D. 116
14. If the aggregate supply curve shifted to the right by \$8bn at each of the given price levels, the new equilibrium price index would be
- A. 128
 - B. 124
 - C. 120
 - D. 116
15. If the level of aggregate demand is \$33 bn, what is the value of investment expenditure?
- A. \$4 bn
 - B. \$6 bn
 - C. \$8 bn
 - D. \$10 bn

Chapter 23

The Keynesian Multiplier (HL Only)

Task 1 – Matching exercise

Match the key terms with the correct explanation:

Terminology	Definition
1. Gross domestic product (GDP)	a. The sum of savings, taxes and import expenditure which withdraw money from the circular flow of income
2. Injections	b. Measures the proportion of any increase in a household's income that is saved rather than spent, i.e. $\Delta S / \Delta Y$.
3. Keynesian multiplier	c. Measures the proportion of any increase in a household's income that is spent rather than saved, i.e. $\Delta C / \Delta Y$.
4. Leakages	d. The sum of expenditure on consumption, investment and the government, along with net export earnings.
5. Marginal propensity to consume (MPC)	e. These factors increase the value of the multiplier, namely export earnings, government spending and investment.
6. Marginal propensity to import (MPM)	f. This shows that any increase in the value of injections results in a larger increase in aggregate demand.
7. Marginal propensity to save (MPS)	g. This measures the proportion of each extra dollar of income that is taken by the government.
8. Marginal propensity to tax (MPT)	h. Measures the proportion of any increase in a household's income that is spent on imports, i.e. $\Delta M / \Delta Y$.

Task 2 – Calculations and explanations...

- a. If the British government spends £9.3 million on the Olympic Games and the economy's marginal propensity to consume (MPC) is 0.7, calculate the expected change in national income.
-
-
- b. If the Mexican economy faces a \$15 billion recessionary gap and its MPC is 0.8, calculate the amount of government expenditure needed to restore equilibrium.
-
-
- c. If the Portuguese government raises taxes by \$20 billion due inflationary pressures in the economy, with an MPC = 0.75, calculate the impact of its national output.
-
-

- d. Calculate the total change in the national output of Croatia if taxes are increased by \$300 million and if the country's MPC is 0.7
- e. Explain why calculating the value of the multiplier is useful for government macroeconomic policy.
- f. Explain why the shape of the long run aggregate supply curve affects the size, and hence the effectiveness, of the multiplier effect on the macro economy.

Task 3 – True or False? 👍👎

	True / False
a. The greater the slope of the aggregate supply curve, the larger is the multiplier effect of a change in investment spending tends to be.	
b. The multiplier measures how a change in injections into the circular flow of income will change the level of national income in the economy.	
c. The main injections into the circular flow of income are saving, taxation and imports.	
d. If government expenditure increases by \$100m and the multiplier is 3.0, then equilibrium real national income will increase by \$300m.	
e. If the marginal propensity to consume is 0.6, this suggests that for each extra \$1 earned, households will spend \$0.4.	
f. The multiplier only increases real national income, i.e. it cannot be negative.	
g. If investment expenditure falls by \$12 billion and the marginal propensity to consume is known to be 0.65, then the aggregate demand curve shifts by \$34.28bn at each price level.	
h. Ceteris paribus, a reduction in the marginal rate of taxation will cause an increase in the size of the multiplier.	
i. If an economy's marginal propensity to consume is 0.8, the size of its multiplier is 5.0.	
j. The size of the multiplier is not affected by changes in the rate of inflation.	
k. The larger the value of leakages from an economy, the lower the value of the multiplier is, vice versa.	

Task 4 – Multiple Choice

1. Which of the following is not an injection into the circular flow of income?
 - A. Investment expenditure
 - B. Government Spending
 - C. Export revenues
 - D. Consumption expenditure

2. Which of the following concepts is not used to help calculate the value of the Keynesian multiplier?
 - A. Marginal propensity to save
 - B. Marginal propensity to consume
 - C. Marginal propensity to import
 - D. Marginal propensity to invest

3. The marginal propensity to consume measures
 - A. The average expenditure of households in an economy
 - B. The amount of each extra dollar of income that is not taxable
 - C. The extra household spending from each extra dollar of income earned
 - D. The extra total expenditure from each extra dollar of income earned

4. An increase in the marginal propensity to consume will tend to
 - A. Reduce real national income
 - B. Reduce the size of the multiplier
 - C. Increase the size of the multiplier
 - D. Increase the marginal propensity to save

5. As an economy develops, its marginal propensity to consume tends to
 - A. Decline
 - B. Increase
 - C. Equal zero
 - D. Equal one

6. As an economy's national income increases
 - A. The value of the average propensity to consume will equal the value of the marginal propensity to consume
 - B. The value of the average propensity to consume diverges from the value of the marginal propensity to consume
 - C. The value of the average propensity to consume will converge with the value of the marginal propensity to consume
 - D. The value of the average propensity to consume will increase along with the value of the marginal propensity to consume

7. Which statement is incorrect?
- A. Time lags occur between changes in aggregate demand and corresponding changes in investment expenditure
 - B. The multiplier is calculated as $1 / (1 - MPC)$, which is equivalent to $1 / (MPS + MPT + MPM)$
 - C. The sum of MPC, MPS, MPT and MPM always equals to 1
 - D. The larger the value of the withdrawals, the larger the value of the multiplier
8. If consumption expenditure increases by \$8 billion and the economy's marginal propensity to consume is known to be 0.7, by how much will national income increase by?
- A. \$5.6bn
 - B. \$8bn
 - C. \$11.42bn
 - D. \$26.67bn
9. If taxes are cut by \$30 million in an economy with a MPC equal to 0.7, the change in national income would be
- A. +42.85m
 - B. +\$70m
 - C. -\$70m
 - D. +100m
10. If an economy with a marginal propensity to consume equal to 0.75 needs to reduce its real GDP by \$35 billion to prevent inflationary pressures, its government expenditure could be reduced by
- A. \$8.75bn
 - B. \$26.25bn
 - C. \$46.67bn
 - D. \$140bn
11. Suppose a country in recession faces a recessionary gap of \$121 billion. The MPC is known to be 0.66. By how much will government taxes need to be cut by to close the recessionary gap?
- A. \$54.54bn
 - B. \$62.33bn
 - C. \$201.67bn
 - D. \$234.88bn
12. Suppose a government increases its spending by \$45 million whilst its MPC is 0.75. What is the total change in the value of national output?
- A. Increase by \$180 million
 - B. Decrease by \$180 million
 - C. Increase by \$60 million
 - D. Decrease by \$60 million

Questions 13 – 15 refer to the hypothetical Keynesian consumption function for a country, given as $C = 100 + 0.75 Y_d$, where C = consumption and Y_d = disposable household income. Suppose the average household disposable income is \$1,500.

13. What is the value of the marginal propensity to consume?

- A. 0.75
- B. 0.816
- C. 1.125
- D. 11.25

14. What is the value of total consumption?

- A. \$1,575
- B. \$1,500
- C. \$1,225
- D. \$1,125

15. What is the value of the average propensity to consume?

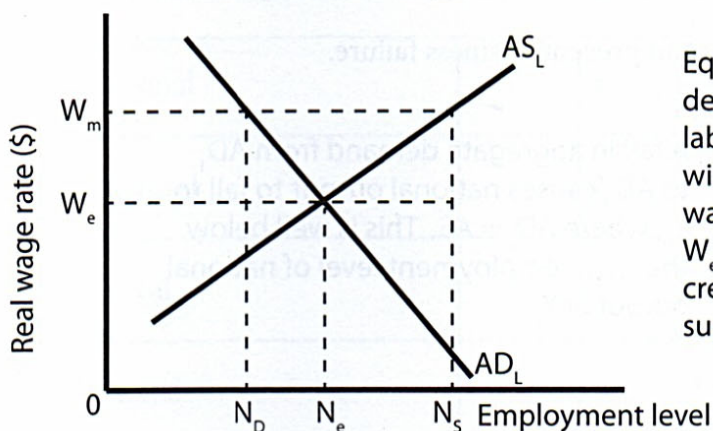
- A. 11.25
- B. 1.125
- C. 0.816
- D. 0.75

Chapter 24

Macroeconomic Objectives: Employment

Task 1 – Complete the missing words...

Equilibrium in the labour market exists when the for labour is equal to the of the labour (the number of people able and willing to work at the prevailing market wage rate). Unemployment exists when these two forces are in disequilibrium. For example, the diagram below shows real wage unemployment, which exists when real wages are above their market clearing level.



Equilibrium in the labour market exists where the demand for labour (AD_L) is equal to the supply of labour (AS_L) in the economy. Hence, everyone willing and able to work at the prevailing market wage rate is employed. A wage rate set above the W_e (such as a wage set at W_m) risks creating unemployment as there will be supply of labour (from N_S to N_D).

The unemployment rate is calculated using the formula:

$$\frac{\text{Number of unemployed people}}{\text{Labour force}} \times 100$$

The four main types of unemployment are considered below.

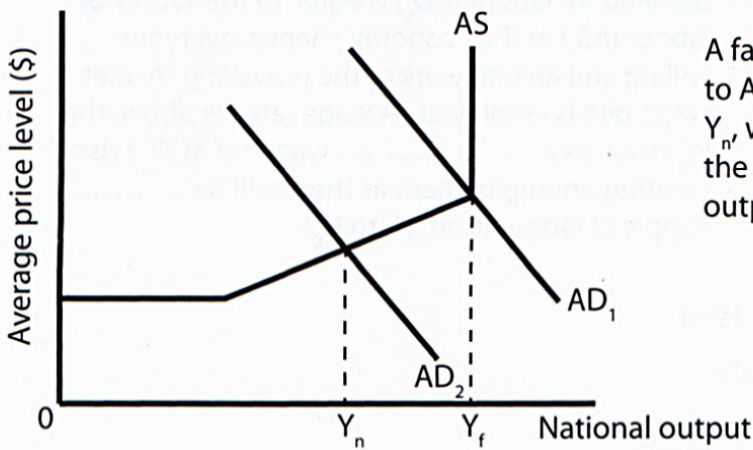
..... unemployment is a type of voluntary unemployment which exists when people are in transitional unemployment as they search for a better job or are waiting to start a new job. The greater the labour market imperfections, the this delay will be.

..... unemployment is caused by periodical changes in the time of year, such as off-seasons in certain industries. For example, beach and holiday resorts lay off workers in the winter. Monsoon (rainy) seasons cause problems for many farmers, construction firms and theme parks, thereby negatively affecting employment in these sectors.

..... unemployment – this occurs when there is a term decline in the demand for labour in a specific industry. For example, the UK has suffered from structural unemployment in the motor manufacturing,

shipbuilding, coal, steel and textiles industries. has led to multinational corporations relocating production plants to more cost-effective countries, thereby creating structural unemployment in less cost-effective countries. Those suffering from this type of tend to find it difficult to secure new work opportunities due to a mismatch of their and those required by employers in other industries, i.e. there is a problem of immobility of labour. Hence, there is a need for retraining to help these people seek employment.

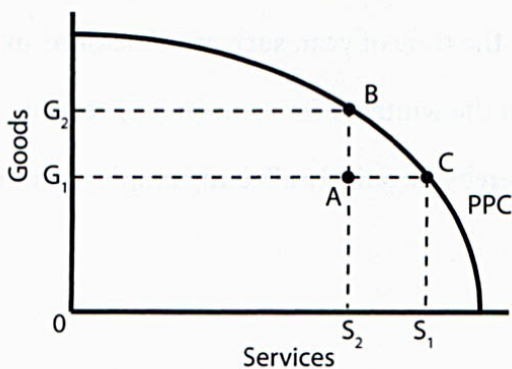
..... unemployment – this is the most severe type of unemployment, caused by a lack of demand for goods and services in the economy. Hence, call this type of unemployment “demand deficient unemployment”. It affects all, if not most, industries and is apparent during an economic recession with mass job losses to control costs, protect profitability and prevent business failure.



A fall in aggregate demand from AD_1 to AD_2 causes national output to fall to Y_n , where $AD_2 = AS$. This is well below the employment level of national output at Y_f .

The concept of **hidden unemployment** is important to economists. There are plenty of people who are not considered in the official calculation of unemployment statistics (purely due to the choice of measurement) rather the core meaning of unemployment (the redundancy or non-use of factors of production). Hidden unemployment will include, for example, workers who have stopped actively searching for employment.

Whichever measure or definition is used, unemployment represents an use of scarce resources, thereby hindering potential output as shown in the diagram below.



The economy will operate within its production possibility curve (PPC) if there are any unemployed resources, such as point in the diagram. Operating at this point represents a waste of scarce labour resources, i.e. there is inefficiency as output of the economy is below output. There is no opportunity cost if the economy moves towards a point on the PPC between points and

Task 2 – Matching exercise

a. Match the correct policy to resolve the given types of unemployment:

A	Frictional		1	Strategies to help improve the occupational and geographical mobility of labour
B	Structural		2	Retraining programmes to foster flexibility and encouraging year-round job opportunities
C	Cyclical		3	Improve job information to reduce transitional time between jobs.
D	Seasonal		4	Increased government spending and/or lower taxes to boost aggregate demand

b. Match the correct causes of unemployment to the given types of unemployment:

A	Frictional		1	Falling aggregate demand in the economy; Lower business and consumer confidence levels
B	Structural		2	People choose to take a break before starting their new job; delays in applying for and starting a new job
C	Cyclical		3	Periodical fluctuations in demand for different goods and services
D	Seasonal		4	Declining industries reduce the demand for labour; labour immobility to switch to other jobs / professions

Task 3 – True or False? 👍 🗑️

	True / False
a. Full employment does not mean there is no unemployment, but that everyone who wants a job can find one.	
b. Underemployment exists when people who are technically employed (such as part-time staff) are able and willing to work but cannot find full-time employment.	
c. The measurement of an unemployment rate is an average so therefore ignores age, ethnic and gender or disparities.	
d. The government can choose to deal with cyclical unemployment by running a budget deficit.	
e. Frictional unemployment is involuntary unemployment, whereas cyclical unemployment can be voluntary unemployment.	
f. Cyclical unemployment occurs during a downturn in the business cycle.	
g. Discouraged workers, who have given up looking for employment, are included when calculating the unemployment rate.	
h. A retired person is not considered to be part of the labour force whereas someone who willingly quit their job in search of better opportunities is included.	
i. A factory worker who is structurally unemployed but seeking to change his profession is considered part of the labour force.	
j. A commercial banker, who quits her job to retrain as an Economics teacher on a teacher training course, is considered part of the labour force.	

Task 4 – Unemployment Vocabulary Quiz

Identify the key terms from the definitions given. *Hint: answers appear in alphabetical order!*

Key Term	Definition
	This type of long term unemployment is caused by a decrease in aggregate demand affecting most, if not all, industries in the economy.
	This is transitional unemployment which occurs when people move between jobs or have left a job and are actively looking for a job.
	This occurs when unemployment exists but these people are not officially included in the calculation of unemployment, such as discouraged workers.
	Refers to those people of working age who are currently in employment and those who are seeking work, i.e. those available for work at current wage rates.
	This type of unemployment occurs due to fluctuations and periodic changes in the level of demand for a certain good or service.
	This type of unemployment exists when there is a change in the demand for goods and services produced in certain industries.
	This occurs when people are willing to work full time but can only find part-time employment, this resulting in a loss of potential output.
	This refers to the non-use of a factor of production, such as labour, i.e. people who are registered as able and willing to work at the going wage rate but who cannot find employment.
	This measures the percentage of the labour force that is unemployed. It is calculated by the total unemployed / total labour force * 100.

Task 5 – Explain...

a. Why low unemployment is a key macroeconomic objective.

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b. Three economic consequences of unemployment.

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c. Three consequences of unemployment to the unemployed (and hence to society).

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- d. Two methods of improving the flexibility, and hence mobility, of the labour force.
- e. Why government spending might not be an effective policy to reduce the level of unemployment.

Task 6 – Multiple Choice

- 1. Unemployment caused by a fall in aggregate demand is known as
 - A. Cyclical
 - B. Frictional
 - C. Seasonal
 - D. Structural
- 2. Which type of unemployment exists when aggregate demand falls due to a recession, causing firms to cut back on production?
 - A. Structural
 - B. Demand deficient
 - C. Seasonal
 - D. Frictional
- 3. Underemployment occurs when
 - A. Those who can work do not have jobs
 - B. More workers are hired than is economically efficient
 - C. People work less productively than they are capable of
 - D. When aggregate demand exceeds aggregate supply
- 4. The use of self-service automated checkouts at major supermarket chains has led to
 - A. Structural unemployment
 - B. Technological unemployment
 - C. Cyclical unemployment
 - D. Frictional unemployment
- 5. Regular but temporary fluctuations in demand cause which type of unemployment?
 - A. Seasonal
 - B. Frictional
 - C. Structural
 - D. Cyclical
- 6. Which of the following is not a cause of structural unemployment?
 - A. Changes in demand for labour in a particular industry
 - B. Changes in geographical location of a particular industry
 - C. Labour market rigidities
 - D. Seasonal changes in aggregate demand

7. In calculating the unemployment rate, which of the following is not ignored?
 - A. Regional disparities
 - B. Ethnic origin
 - C. Gender differences
 - D. Those in full-time employment

8. In order to combat cyclical unemployment, the government might choose to
 - A. Raise interest rates
 - B. Raise the exchange rate
 - C. Reduce direct taxes
 - D. Reduce government spending

9. Which statement does not apply to frictional unemployment?
 - A. It is transitional unemployment due to people moving between jobs
 - B. Imperfect information in the labour market can worsen frictional unemployment as people are unaware of jobs that are available
 - C. It takes time to find appropriate jobs at wage rates the unemployed are willing to accept
 - D. It is caused by a lack of incentives to work

10. Individuals who are able to work but are not willing to look for employment are said to be in
 - A. Voluntary unemployment
 - B. Frictional unemployment
 - C. Cyclical unemployment
 - D. Seasonally unemployment

11. Those who have given up looking for work are classified as
 - A. Involuntarily unemployed
 - B. Discouraged workers
 - C. Deskilled workers
 - D. Seasonally unemployed

12. Which of the following is not part of the labour force of a country?
 - A. The employed
 - B. The unemployed
 - C. Those able to work but in full-time education
 - D. Those actively seeking employment

13. The unemployment rate is measure by calculating the percentage of
 - A. The labour force that is unemployed
 - B. The labour force of working age without a job
 - C. The population that is unemployed
 - D. The population that are willing but unable to find a job

14. Bankers who are laid off (made redundant) following a major financial crisis suffer from
 - A. Seasonal unemployment
 - B. Structural unemployment
 - C. Frictional unemployment
 - D. Cyclical unemployment

15. Which government policy would be most beneficial to those suffering from structural unemployment?
- A. Expansionary fiscal policy to stimulate economic growth
 - B. Expansionary monetary policy to stimulate economic growth
 - C. Raising the national minimum wage
 - D. Job training and development schemes
16. Which of the following does not highlight a problem in calculating the unemployment rate?
- A. Hidden unemployment
 - B. Underemployment
 - C. Employment in underground parallel markets
 - D. The official retirement in the country
17. Costs of high unemployment do not include
- A. The loss of income
 - B. The loss of national output
 - C. Social costs linked to social deprivation
 - D. Rising costs of production
18. Which of the following is not a supply-side policy used to reduce unemployment?
- A. Providing more information about available jobs
 - B. Providing education and training programmes
 - C. Providing people with relocation grants to find work in other places
 - D. Providing tax incentives and raising government spending
19. Structural unemployment is most likely to be reduced by
- A. Cutting tax rates for households and firms
 - B. Cutting interest rates
 - C. Increasing tariffs and other protectionist measures
 - D. Increasing (re)training opportunities for the unemployed
20. Which option below does not show how a fall in aggregate demand causes cyclical unemployment?
- A. A shift of the long run aggregate supply curve to the left
 - B. An inward shift of the production possibility curve
 - C. An inward shift of the aggregate demand curve
 - D. Excess supply of labour exists in the labour market
21. What is the unemployment rate in a country with 80 million people, of which 60 million are of working age and 5 million people are actively seeking employment but unable to find employment? (HL Only)
- A. 6.25%
 - B. 7.50%
 - C. 8.33%
 - D. 25.0%

Questions 22 – 23 refer to the following data for a country:

Total population	120 million
Percentage of population employed	66.7%
Population of unemployed	10 million
Retired population	15%

22. The most accurate estimate of the size of the country's labour force is *(HL Only)*

- A. 84 million
- B. 90 million
- C. 102 million
- D. 120 million

23. The unemployment rate is *(HL Only)*

- A. 8.3%
- B. 12.5%
- C. 11.1%
- D. 23.3%

Questions 24 – 25 refer to the following data for another country:

Labour force	18 million
Population of working age	25 million
Unemployment rate	8%

24. The number of unemployed people in the country is *(HL Only)*

- A. 1.44 million
- B. 2.0 million
- C. 14.4 million
- D. 20 million

25. Which of the following groups of people do not account for the 7m difference between those in the labour force and those of working age? *(HL Only)*

- A. Prisoners
- B. Discouraged workers
- C. Those who are frictionally unemployed
- D. Adults in full-time education

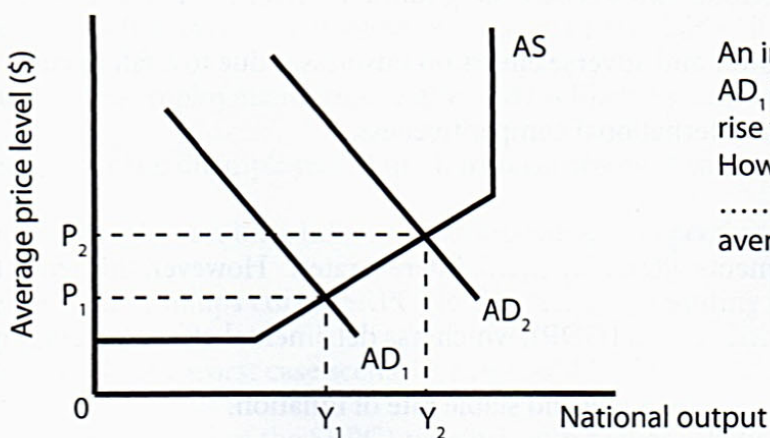
Chapter 25

Macroeconomic Objectives: Inflation

Task 1 – Complete the missing words...

Inflation can be defined as a sustained (continual) rise in the general (average) level. The Consumer Price Index (CPI) is a common measure of inflation, by calculating the relative price changes of a representative of goods and services consumed by the household in the country. Weights placed on different categories of expenditure reflect the relative importance of household spending based on the percentage of household spent on those items. Hence, the weighting for items that have a greater impact on the typical household will be assigned a weighting. Weights are revised periodically to reflect changes and trends in the expenditure of an average household.

In general, the causes of inflation can be categorized as either demand-pull or cost-push.-..... inflation occurs when costs of production rise, forcing firms to raise their prices to maintain profit margins. This might be caused by higher raw material prices, higher rent or poor productivity. Diagrammatically, this can be shown by a leftwards shift of the short run aggregate curve.-..... inflation is caused by excessive aggregate demand, thereby forcing up the average price level. An increase in any component of aggregate demand (consumption, investment, government spending and net exports) will cause demand pull inflation (see diagram below). This might be due to higher per head, lower levels of unemployment or tax cuts. Diagrammatically, this can be shown by a shift of the aggregate curve.



An increase in aggregate demand from AD_1 to AD_2 causes national output to rise from Y_1 to Y_2 , where $AD_2 = AS$. However, this also causes-.....inflation, raising the average price level from P_1 to P_2 .

Remedies for cost-push inflation include:

- Government intervention to limit nominal wage increases
- Negotiations with unions to match any wage rises with higher productivity

- Subsidize production to moderate costs, and hence
- Revalue the rate to lower the cost of imported raw materials.

Remedies for demand-pull inflation include:

- fiscal policy to reduce aggregate demand, e.g. by increasing taxes and/or lowering government spending
- Tight monetary policy, i.e. interest rates or growth of the money supply
- Stimulate an increase in national output, perhaps by improving productivity and/or labour relations
- Investment in capital, e.g. labour training schemes (with increased productivity in the long run)
- controls to reduce the chances of experiencing imported inflation.

Economists differ in their view on what causes inflation. argue that there is a need to control the money supply to control any rise in the average price level. believe inflation is caused by an increase in aggregate demand in the economy so this must be controlled (to prevent a rise in consumption or investment, for example).

Governments aim to control the rate of inflation because inflation (or a lack of price stability) creates uncertainty in the economy.

By contrast, occurs when there is a sustained in the general price level, i.e. there is negative inflation. is different from deflation in that it refers to a fall in the rate of inflation, i.e. prices are still, but at a rate than before.

The effects (or negative consequences) of inflation include: exports becoming more, fixed income earners suffering from a fall in their real spending power and adverse effects on businesses due to a fall in consumer and business confidence levels and a decline in international competitiveness.

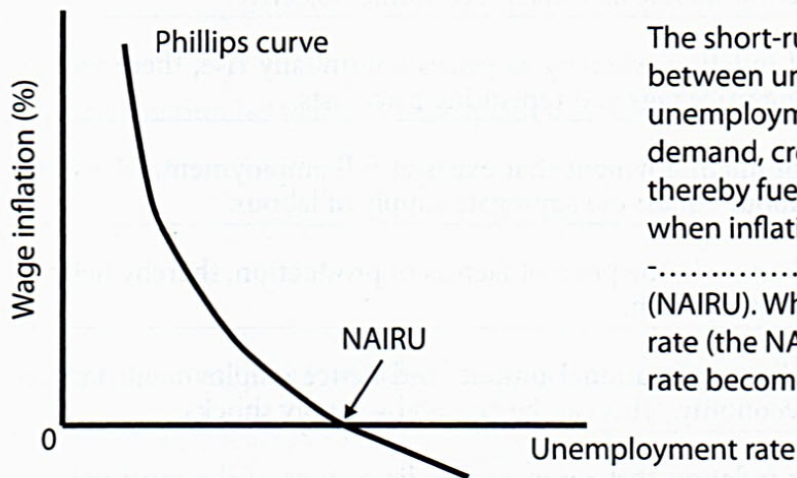
To combat the problems caused by inflation, governments often interest rates. However, this tends to have a negative effect on investment and (GDP), which has detrimental effects on employment rates. Governments aim for, i.e. a low and stable rate of inflation.

However, it should be noted that the CPI does not account for changes in the of products. For example, carmakers and smartphone producers might charge higher prices for products, but the higher specifications and build quality are not reflected in the calculation of the

..... price level, it can hide the fact that the prices of some goods and services have increased more rapidly than others, whilst prices of other products may have even fallen.

(HL Only)

William Phillips (1958) showed through data spanning from 1861 – 1957 that there was a trade-off between the rate and the rate of change of money wages (correlating to price level stability). For example, if the government wanted to reduce unemployment via fiscal and monetary policies, the resulting shift of the aggregate demand curve would increase national output (and hence employment) but at the cost of higher inflation in the economy.



The short-run Phillips curve shows a trade-off between unemployment and inflation. A cut in unemployment, caused by a rise in aggregate demand, creates more spending in the economy thereby fuelling inflation. The level of unemployment when inflation is zero is known as the
 Of
 (NAIRU). When unemployment is above its natural rate (the NAIRU), occurs as the inflation rate becomes negative.

Although a government might not be able to control unemployment and inflation simultaneously, the Phillips curve suggested an cost in striving to achieve either macroeconomic objective, i.e. for any given target rate of inflation, the government could see how much unemployment to expect. However, later studies showed that this trade-off seemed to only exist in the short run. The long-run Phillips curve was shown to be at the rate of unemployment (NRU), and so there is no trade-off as inflation would be stable. The NRU is the level of unemployment that is unavoidable. It can be found by adding up frictional, seasonal and structural unemployment. Hence, the NRU is likely to if the government encourages more (re)training schemes for the unemployed. Any short term attempts to reduce unemployment will be ineffective in the long run because the resulting inflation leads to workers expecting and demanding higher nominal wages. This shifts the short run Phillips curve (SRPC) to the, resulting in higher inflation without any corresponding fall in the NRU. In the worst case scenario, this could lead to as unemployment rates are higher (due to the rightwards shift of the SRPC) together with higher inflation.

Task 2 – Inflation Vocabulary Quiz

Identify the key terms from the definitions given. *Hint: answers appear in alphabetical order!*

Key Term	Definition
	A persistent decline in the average price level in an economy over time, caused by falling aggregate demand or an increase in aggregate supply.
	This refers to reductions in the rate of inflation rather than reductions in the average price.
	This refers to a rise in the general level of prices of goods and services over time. Governments set a target for its rate as a macroeconomic objective.
	This is a type of cost of inflation whereby as prices continually rise, there will be ongoing costs of changing price tags and reprinting price lists.
	This refers to the level of unemployment that exists at full employment, where the aggregate demand for labour equals the aggregate supply of labour.
	This measure looks at changes in the price of factors of production, thereby helping to predict the future rate of inflation.
	This situation occurs when real national output, and hence employment, fall yet there is inflation in the economy. This can be caused by supply shocks.
	An adjusted measure of inflation that removes the distortions of the most volatile prices of items such as oil, food and energy.

Task 3 – True or False? 👍 👎

	True / False
a. Inflation diminishes the ability of money to function as a medium of exchange.	
b. Higher import prices can cause domestic inflation.	
c. Deflation is not necessarily detrimental to the economy as it can make export prices relatively cheaper.	
d. If the consumer price index moves from 165 to 160, then there has been disinflation.	
e. If the consumer price index changes from 185 to 190, then the annual rate of inflation is 5%.	
f. Fixed income earners such as pensioners and those on unemployed benefits tend to lose out significantly if there is inflation.	
g. Real interest rates fall when there is inflation, so both savers and lenders lose out.	
h. Demand pull inflation may occur as a result of both an increase in government spending and an increase in demand for exports.	
i. An increase in aggregate demand is least likely to result in inflation when aggregate supply is price inelastic.	
j. A fall in the consumer price index of a country suggests that the purchasing power of money has risen.	

k.	Deflation can be caused by an increase in an economy's productive potential which leads to aggregate supply exceeding aggregate demand.	
l.	A rightwards shift of the short run Phillips curve is consistent with the existence of stagflation.	
m.	An inflation-unemployment tradeoff only occurs in the long run.	

Task 4 – Explain...

- a. Why governments often aim to have low rates of inflation as a macroeconomic objective.
- b. The distinction between cost-push and demand-pull as causes of inflation.
- c. How the pursuit of a low rate of inflation can conflict with other macroeconomic objectives.
- d. How the internet has reduced two traditional costs of inflation: 'shoe leather costs' and 'menu costs'.
- e. Explain why a low but positive rate of inflation is often considered as a precondition for sustained economic growth
- f. Two different stakeholder groups that may experience different rates of inflation, as their pattern of consumption is not accurately reflected in the consumer price index.
- g. Two different stakeholder groups that lose out from inflation in the economy.

Task 5 – Calculations £€¥ (HL only)

- a. Calculate the inflation rate if there is a change in the consumer price index from 125 to 130.
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- b. Calculate the price index if there is 2.5% inflation during the year if the index was previously at 132.
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- c. Referring to the data in the table below, calculate the correct weighted price index for all items.

Item	Price Index	Weight
Food	110	20
Housing	130	40
Others	140	40

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Task 6 – Multiple Choice

1. A change in the purchasing power of money can be best measured by a change in the
- A. Nominal income
B. Consumer price index
C. Exchange rate
D. Interest rates
2. Ceteris paribus, what is the likely outcome of disinflation on an economy?
- A. Prices rise at an accelerating rate
B. Prices fall on average
C. Prices rise at a decelerating rate
D. Improved international competitiveness
3. Which statement does not apply to the calculation of a consumer price index?
- A. It is measured from a base year
B. It can be revised to consider new products
C. It is a weighted index
D. It excludes the change in prices of subsidized goods and services
4. Which type of inflation is likely to be the most problematic for an economy?
- A. Creeping
B. Hyper
C. Disinflation
D. Deflation

5. Which of the following is not a limitation of using the CPI as a measure of inflation?
- The index only considers the expenditure of the 'average' household
 - The CPI ignores income and wealth inequality and their impact on consumer spending
 - Not all goods and services have the same rate of inflation as the CPI is only an average
 - Weights used to calculate the index cannot be applied objectively
6. Which of the statements about inflation is correct?
- It allows money to act as a store of value
 - It allows households and firms to defer payments over time
 - It does not affect money as a unit of account
 - It reduces the effectiveness of money as a medium of exchange
7. Which of these statements about inflation is incorrect?
- It creates greater uncertainty
 - It damages export competitiveness
 - It creates incentives for savings to preserve the value of money
 - It reduces the real value of money
8. Which of the statements below is not a consequence of prolonged deflation?
- Cyclical unemployment
 - Business bankruptcies
 - Economic recession
 - Financial and currency crisis
9. The stakeholder group that loses out the least from inflation is
- Exporters
 - Importers
 - Borrowers
 - Government
10. Which of the following does not cause cost-push inflation?
- Severe weather conditions harming output and productivity
 - An increase in wage rates in the economy
 - Higher imported prices of raw materials and components
 - Higher amount of consumer expenditure
11. Which statement below does not apply to a situation when the inflation rate changes from 5% to 4%?
- There is disinflation
 - The purchasing power of money has fallen
 - Prices are rising
 - Exporters gain from lower prices
12. The consumer price index
- Measures changes in the cost of living of a representative household
 - Measures the cost of living for a typical household in the economy
 - Ignores the change in expenditure on mortgages and other household expenditure
 - Ignores the expenditure on imported goods and services

- A. It has no resemblance and therefore relevance for atypical households
- B. Housing costs vary enormously between countries making international comparisons difficult
- C. The CPI does not reflect regional differences and disparities
- D. Compilation of the CPI is not quick to respond to changes in fashion, tastes and technology

14. A rise in which of the following variables is not generally associated with demand-pull inflation?

- A. Prices
- B. Money income levels
- C. Unemployment
- D. Tax revenues

15. Which stakeholder group is most likely to benefit from a prolonged period of inflation?

- A. Exporters of price elastic goods
- B. Pensioners on fixed incomes
- C. People and businesses with existing debts
- D. People and businesses with large sums of money in bank accounts

16. Which option below best explains why an increase in domestic interest rates might reduce the inflation rate?

- A. A fall in new investment expenditure due to higher interest rates
- B. Reduced consumption due to higher loan repayments for those with existing loans
- C. A subsequent depreciation of the currency on the foreign exchange market
- D. An increase in the money supply due to capital inflow attracted by higher interest rates

17. The consequences of inflation do not include

- A. Discourages savings as money is less effective as a store of value
- B. Creditors lose financially
- C. Producers of price inelastic products lose out in the short run
- D. Labour unions push for wage increases

18. Which of the statements below is correct?

- A. Inflation, through higher prices, cuts aggregate demand thereby leading to a recession
- B. Deflation is relatively desirable to inflation
- C. Disinflation can damage a country's international competitiveness
- D. Disinflation is worse than deflation but not as bad for the economy as inflation

19. Costs of deflation caused by declining aggregate demand do not include

- A. A rise in unemployment
- B. Lower incentives to investment as firms receive lower prices and hence profitability
- C. A rise in the real value of in debts
- D. A rise in real national output along with a decline in the average price level

20. Which statement below is untrue?
- A. Monetarists believe an increase in the money supply results in higher levels of aggregate demand but this is purely inflationary in the long run
 - B. Contractionary fiscal policies and tight monetary policies can be used to combat inflation
 - C. In calculating inflation, the weighting attached to different items is based on the percentage of average household income spent on that item
 - D. Disinflation occurs when the rate of inflation is negative, i.e. average prices are falling

21. The data below shows the January rate of inflation for China from 1995 to 2010. Which of the following statements is correct? (HL Only)

Year	2009	2010	2011	2012
Inflation rate (%)	5.9	-0.7%	5%	3.2%

- A. Prices were at their highest in 2012
- B. Prices were at their lowest in 2010
- C. The inflation rate was at its lowest in 2009
- D. The inflation rate was at its highest in 2012

22. What can be deduced from the table below? (HL Only)

Year	CPI	Year	CPI
2011	120	2012	130
2013	140	2014	150

- A. Constant rate of inflation
- B. Accelerating inflation
- C. Deflation
- D. Disinflation

23. Which of the following statements applies to the Phillips curve? (HL Only)

- A. In the long run, there is no trade-off between inflation and unemployment
- B. In the long run, there is a trade-off between inflation and unemployment
- C. In the short run, there is no trade-off between inflation and unemployment
- D. In the short run, the Phillips curve can be horizontal

24. Consider the main weights in the consumer price index for country X last year (*HL Only*)

Item of expenditure	Weighting
Clothing and footwear	85
Food	110
Holidays	65
Housing	260
Transport and vehicles	100

It can be deduced from the above information that the average household

- A. Valued 'housing' four times higher than 'holidays'
- B. Spent more money on 'food' than on 'holidays' as the inflation rate of 'food' was higher than that of 'holidays'
- C. Spent a smaller proportion of their income on holidays than on clothing and footwear
- D. The cost of 'clothing and footwear' and 'holidays' was subsidized more than any other item

25. Calculate the weighted price index from the information below (*HL Only*)

Item	Price Index	Weighting
Entertainment	120	25
Food	130	15
Holidays	110	10
Housing	180	50

- A. 135
- B. 150.5
- C. 540
- D. 15,050

26. A reduction in structural unemployment will tend to (*HL Only*)

- A. Shift the Phillips curve to the right
- B. Shift the Phillips curve to the left
- C. Shift the aggregate demand curve to the left
- D. Shift the aggregate supply curve to the right

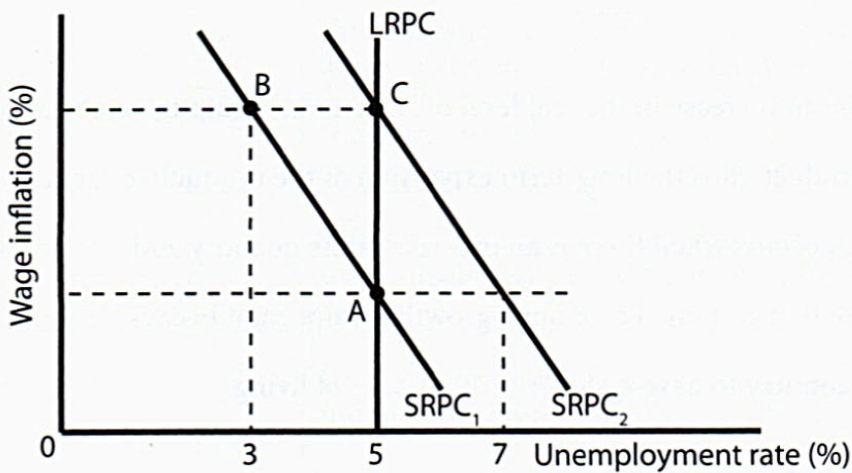
27. *Ceteris paribus*, an increase in the level of aggregate demand will (*HL Only*)

- A. Cause a movement down the Phillips curve
- B. Cause a movement up the Phillips curve
- C. Shift the Phillips curve to the left
- D. Shift the Phillips curve to the right

28. Supply shocks that shift the short-run Phillips curve to the right do not include (HL Only)

- A. An oil crisis
- B. Natural disasters such as severe flooding
- C. An appreciation in the exchange rate
- D. The spread of contagious (infectious) diseases

Questions 29 – 30 refer to the diagram below:



29. The natural rate of unemployment is (HL Only)

- A. 0%
- B. 2%
- C. 5%
- D. 7%

30. Which of the statements below is incorrect? (HL Only)

- A. If the economy is at Point B, the short run Phillips curve would shift from SRPC₁ to SRPC₂ with unemployment reverting to its natural rate
- B. The movement from Point A to Point B can be caused by expansionary fiscal policy
- C. Any attempt to temporarily reduce unemployment below its natural rate will be inflationary in the long run, as shown by the movement from Point B to Point C
- D. The short run Phillips curve shifts from SRPC₁ to SRPC₂ due to workers realising that real wages have increased

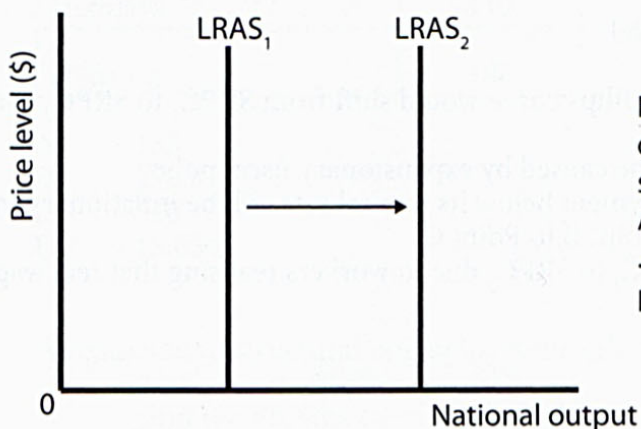
Chapter 26

Macroeconomic Objectives: Economic growth

Task 1 – Complete the missing words...

Economic growth is the term used to describe an increase in the real level of output, i.e. the annual change in real gross domestic product. It is the long-term expansion of the productive capacity of the economy. In general terms, economic growth occurs when there is an increase in the quantity and/or quality of factors of production. Most economists agree that sustained economic growth is important because it is the most practical way for the majority of people in a country to have a higher of living.

Sustained economic growth is achieved by an increase in the output of the economy. This is caused by an in the quantity and/or quality of resources, thereby shifting the long run aggregate supply curve to the For example, an increase in the labour supply or improvements in the state of technology will shift the LRAS curve outwards, as shown in the diagram below:



Economic growth can be shown diagrammatically by a rightwards shift of the LRAS curve. Alternatively, it can be shown by an shift of an economy's production possibility curve.

Related factors that account for differences in economic growth between countries include differences in:

- Factor endowments, such as oil and other natural resources
- The size, skills and mobility of the force
- Investment expenditure in capital and human resources
- productivity

Critics of economic growth argue that it does not resolve socioeconomic problems and market failures, such as resource depletion and income inequality.

Task 2 – Vocabulary Quiz

Identify the correct key term from the clues given below. *Hint: answers appear in reverse alphabetical order.*

Key term	Definition
	This refers to the value of national output that has been inflation-adjusted to reflect the true value of goods and services produced in a given year.
	This refers to the possible level of real national output of an economy, as shown on its production possibility curve, if all resources are used efficiently.
	These are tangible manufactured resources used in production, such as machinery, tools, vehicles and buildings.
	Refers to the stock of non-manufactured (natural) resources that humans and animals rely on for their survival, such as rivers, forests and fish stocks.
	This form of capital is extended through improved education and training, and includes issues such as creativity, enterprise and ingenuity.
	The standard measure of this macroeconomic objective is an increase in real gross domestic product (real GDP) over time.
	This refers to the current, rather than potential, level of real national output (or gross domestic product) in the economy.

Task 3 – Explain... 

a. Two advantages of economic growth.

b. Two disadvantages of economic growth.

c. Why investment is important for economic growth.

d. How a GDP deflator is used to calculate the real rate of economic growth.

Task 4 - True or False?

	True / False
a. A better educated workforce tends to generate higher real GDP per capita.	
b. Human capital is infinite in nature whereas physical capital is a highly scarce resource.	
c. Ceteris paribus, an increase in the quantity and quality of factors of production will shift the production possibility curve outwards.	
d. All other things being equal, improved productive efficiency will shift the production possibility curve outwards.	
e. Economic growth always has a positive impact on standards of living but a negative impact on the rate of inflation.	
f. Technological progress is a supply-side factor affecting economic growth as it shifts the LRAS curve outwards to the right.	
g. Economic growth does not necessarily increase GDP per capita.	
h. A rightwards shift of the long run aggregate supply (LRAS) curve represents economic growth.	
i. Supporters of economic growth argue that higher standards of living can lead to environmental protection.	
j. One consequence of economic growth is lower unemployment.	

Task 5 – Multiple Choice

- Economic growth can be best measured by an increase in
 - Real GDP
 - Nominal GDP
 - Real GNP
 - Nominal GNP
- Negative economic growth results in
 - A balance of payments deficit
 - A budget deficit
 - A recession
 - A decline in human capital
- Which of the following is not considered to be natural capital?
 - Fish stocks
 - Trees and forests
 - Wind energy
 - Plant and machinery
- Human capital differs from physical capital in that the former is
 - Limited in supply
 - Effectively limitless
 - Non-renewable
 - A source of economic growth

5. Economic growth can be shown on a diagram by an outward shift of the

- A. Production Possibility Curve
- B. Keynesian aggregate supply curve
- C. Short run aggregate supply curve
- D. Horizontal section of the aggregate demand curve

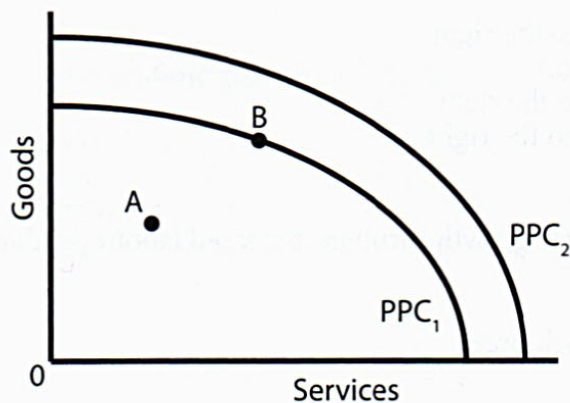
6. A reflationary or deflationary gap will exist if there is a difference between

- A. Real and nominal GDP
- B. Real GDP and real GNP
- C. Actual and potential real GDP
- D. Actual and potential nominal GDP

7. Which of the following is a demand-side factor causing economic growth?

- A. Advances in technology
- B. Improvements in education and training
- C. Discovery of natural resources
- D. Lower interest rates

Questions 8 – 10 refer to the following diagram



8. Which statement does not apply if the economy moves from point A to point B?

- A. Actual output has increased
- B. There is economic growth
- C. Productive efficiency has occurred
- D. There is an opportunity cost in providing more services

9. The movement from point A to point B leads to a simultaneous improvement in which two macroeconomic objectives?

- A. Lower unemployment and economic growth
- B. Fairer income distribution and economic growth
- C. Lower inflation and economic growth
- D. Improved balance of payments and economic growth

10. Which statement does not apply if there is a shift in the production possibility curve from PPC_1 to PPC_2 ?
- A. Increased productive capacity of the economy
 - B. Discovery of new resources
 - C. Increased price levels
 - D. Improved quality of factors of production
11. Which of the following does not necessarily cause economic growth?
- A. Increased productivity
 - B. Investment in physical and human capital
 - C. Higher average prices received by suppliers
 - D. Supply side shocks to the economy
12. Economic growth that does not come at the expense of growth prospects for future generations is known as
- A. Intergenerational equity
 - B. Sustainable growth
 - C. Economic development
 - D. Actual growth
13. Ceteris paribus, an increase in an economy's labour productivity will
- A. Shift the aggregate supply of labour curve to the right
 - B. Shift the aggregate demand curve to the right
 - C. Shift the long run aggregate supply curve to the right
 - D. Shift the short run aggregate supply curve to the right
14. Which of the following is unlikely to cause economic growth through increased labour productivity?
- A. Technological progress
 - B. Improved education and training of the workforce
 - C. Larger workforce
 - D. Investment in human capital
15. An outward shift of a country's production possibility frontier can also be shown by a shift of the
- A. Aggregate demand curve to the right
 - B. Aggregate demand curve to the left
 - C. Long-run aggregate supply curve to the left
 - D. Long-run aggregate supply curve to the left
16. Benefits of growth do not include
- A. It is the key way to improve standards of living for the vast majority of people
 - B. Growth helps to reduce poverty
 - C. There is a direct relationship between growth and external costs
 - D. There is a direct relationship between growth and access to education and health care
17. Ceteris paribus, the trend towards flexible working practices (such as part time employment and working from home) will
- A. Shift the production possibility curve inwards
 - B. Shift the production possibility curve outwards
 - C. Move the economy from a point inside its PPF to a point actually on the PPF curve
 - D. Reduce inequality in income and wealth in the economy

18. Which of the following is not a consequence of economic growth?
- A. An improvement in the balance of payments if net exports increases
 - B. Standards of living can be enhanced for the majority of the population
 - C. Problems of sustainability of scarce resources in the economy
 - D. A long run trade-off between economic growth and inflation

Questions 19 – 20 refer to the following information (*HL Only*)

Year	Nominal GDP (\$bn)	GDP deflator
2011	110.0	100.0
2012	115.5	103.5
2013	121.0	105.0

19. The real GDP in 2012 is
- A. \$110.0bn
 - B. \$111.6bn
 - C. \$115.5bn
 - D. \$115.2bn
20. The rate of economic growth in 2013 is
- A. 1.45%
 - B. 1.5%
 - C. 3.22%
 - D. 3.6%

Chapter 27

Equity in the distribution of income

Task 1 – Matching exercise

Match the key terms with the correct explanation:

Terminology	Definition
1. Absolute poverty	a. Government levy on income, e.g. income tax, capital gains tax and corporation tax.
2. Average rate of tax (HL Only)	b. This occurs when people have the same wealth by reducing or eliminating material inequalities between individuals.
3. Deciles	c. This refers to fairness (such as those with better skills and experience being paid more) rather than equality.
4. Direct tax	d. A graph showing the wealth distribution of a country, such as the poorest 10% earning 1% of the nation's wealth.
5. Equality	e. Measures the change in the tax rate paid from any given change in income.
6. Equity	f. The income threshold deemed adequate for human survival, i.e. minimal standards of food, water, healthcare and shelter.
7. Gini coefficient	g. A method of income redistribution that involves the transmission of money without any corresponding output.
8. Indirect tax	h. Refers to income levels at levels below the socially acceptable level compared with others within a country.
9. Lorenz curve	i. A type of tax involving a lower percentage of income being paid as an individual's income rises.
10. Marginal rate of tax (HL Only)	j. Government levy on expenditure, e.g. goods and services tax.
11. Proportionate tax	k. The ratio of the amount of taxes paid compared to the amount of taxable income.
12. Quintiles	l. Statistical method that divides data into tenths, with each part representing 10% of the sample or the population.
13. Regressive tax	m. This measures a country's inequality in income distribution, ranging from 0 (perfect equality) to 1 (perfect inequality).
14. Relative poverty	n. Statistical method that divides data into fifths, with each representing 20% of the sample or the population.
15. Transfer payments	o. Whilst more tax is paid as an individual's income rises, the amount paid as percentage of income remains unchanged.

Task 2 – Explain...

a. The difference between equality and equity in the distribution of income.

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b. The difference between progressive and regressive taxes.

c. The difference between direct and indirect taxes.

d. Two reasons why governments impose taxes.

e. The characteristics of a 'good' (worthy or well-intentioned) tax.

Task 3 – True or False?

	True / False
a. The free market system does not result in an equal or equitable distribution of income due to the unequal ownership and distribution of factors of production.	
b. Sales taxes, such as Value Added Tax (VAT) and Goods and Services Tax (GST), are examples of regressive taxes.	
c. The average rate of tax decreases with higher incomes under a progressive tax system.	
d. A progressive tax requires an individual to pay more tax as his/her income rises.	
e. Redistributing income involves administrative costs to the government.	
f. Direct, rather than indirect, taxes are used to redistribute income.	
g. Governments may choose to subsidize socially desirable goods and services as a way to redistribute income by making such products available to everyone.	
h. The average rate of tax refers to the percentage of tax paid on the last dollar of an individual's income.	
i. Regressive taxes are considered to be discriminating as they redistribute money from the relatively poor to the relatively rich.	
j. There is a negative correlation between the Gini coefficient and the degree of equality in income distribution.	

Task 4 – Multiple Choice

1. Government policies used to promote equity in the distribution of income do not include

- A. Taxation policy
- B. Government expenditure policy
- C. The use of transfer payments
- D. Investment in education and training

2. Which statement does not apply to the Gini coefficient?
- A. In many countries, the value of the Gini coefficient for urban areas differs from that of rural areas
 - B. It can be used to compare income distribution over time, to see how inequality is increasing or decreasing
 - C. Calculating the Gini coefficient does not depend on the country's population size
 - D. Countries with the same Gini coefficient, have the same income and wealth
3. Which of the following is not a key cause of poverty?
- A. Low income levels
 - B. High unemployment
 - C. High rates of tax
 - D. A lack of human capital
4. Which statement does not apply to relative poverty?
- A. It is dependent on the social context of the country
 - B. It is a key measure of income inequality in a country
 - C. It refers to the percentage of the population with incomes less than a predetermined percentage of the median income
 - D. It measures material deprivation in a country
5. If real income per capita in a country increases, whilst income distribution remains unchanged, then
- A. Relative poverty will stay the same
 - B. Absolute poverty will stay the same
 - C. Direct taxes are likely to be used to redistribute income
 - D. The Gini coefficient will move towards zero
6. Which of the following is not a transfer payment?
- A. Unemployment benefits
 - B. Child benefits
 - C. Income support schemes for the elderly
 - D. Government spending on public transport systems
7. A progressive tax
- A. Falls most heavily on the less well-off members of society
 - B. Takes an increasing proportion of personal income as income rises
 - C. Is levied on earning and wealth
 - D. Is levied on consumer expenditure
8. Which of the following is not a key consequence of poverty?
- A. Low standards of living
 - B. Lack of access to healthcare services
 - C. Lack of access to education
 - D. Lack of effective direct taxes
9. Which of the following is the government least likely to provide directly, rather than subsidize
- A. Education
 - B. Clean water supplies
 - C. Healthcare service
 - D. Public transportation

- 10. Indirect taxes do not include
 - A. Tobacco tax
 - B. Alcohol tax
 - C. Capital gains tax
 - D. Betting (gambling) duties

- 11. Government subsidies are least likely to be applicable to the provision of
 - A. Healthcare services
 - B. Education services
 - C. Postal services
 - D. Sanitation and clean water supplies

- 12. Examples of direct taxes do not include
 - A. Capital gains tax
 - B. New car registration tax
 - C. Income tax
 - D. Inheritance tax

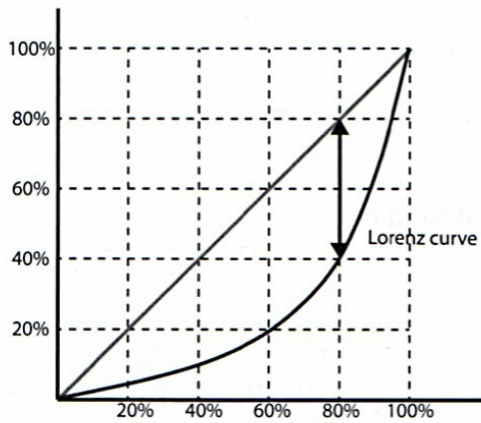
- 13. Which statement applies to a progressive income tax system?
 - A. Someone who earns \$50,000 a year will pay more tax than someone on \$25,000 a year
 - B. Someone who earns \$50,000 a year will pay less tax than someone on \$25,000 a year
 - C. Someone who earns \$50,000 a year will pay more tax than someone on \$25,000 a year as a percentage of their incomes
 - D. Someone who earns \$50,000 a year will pay less tax than someone on \$25,000 a year as a percentage of their incomes

- 14. Suppose a country charges someone earning \$50,000 a year income tax of \$5,000 and another individual \$2,000 on earnings of \$20,000 a year. What type of tax system is being used?
 - A. Progressive
 - B. Proportionate
 - C. Regressive
 - D. Indirect

- 15. Which statement is incorrect?
 - A. A more equitable income distribution can increase efficiency and economic growth
 - B. The marginal rate of tax is calculated as the tax paid divided by household income
 - C. The larger the Gini coefficient, the more equal income distribution tends to be
 - D. With a proportional tax, the average rate of tax rises for those on higher income levels

- 16. A drawback in using taxation as a way of redistributing income and wealth is
 - A. It can create disincentives to work, thereby harming efficiency and economic growth
 - B. Proportional taxes are pointless in redistributing income
 - C. Regressive taxes are inequitable
 - D. Progressive taxes redistribute income to the less well-off members of society

Questions 17 – 19 refer to the Lorenz curve diagram below:



17. The 45-degree line represents
- Income inequality
 - Perfect income equality
 - Lorenz curve
 - Gini coefficient
18. If the y-axis is the cumulative share of income, what is the correct label for the horizontal axis?
- Cumulative share of population
 - Cumulative share of equality
 - Cumulative share of inequality
 - Cumulative distribution of income
19. It can be seen from the Lorenz curve that
- The 1st quintile earns 60% of the national income
 - The 2nd quintile earns 10% of the national income
 - The 3rd quintile earns 60% of the national income
 - The 4th quintile earns 40% of the national income

Questions 20 – 22 refer to the following data for an individual:

Income tier	Tax rate (%)
First \$10,000	0
Next \$15,000	20
Next \$20,000	40
Thereafter	50

20. The personal tax allowance is (*HL Only*)
- \$10,000
 - \$15,000
 - \$20,000
 - \$45,000

21. The marginal rate of income tax for an individual earning \$40,000 is (HL Only)

- A. 0%
- B. 20%
- C. 40%
- D. 50%

22. The average rate of income tax for an individual earning \$40,000 is (HL Only)

- A. 22.5%
- B. 27.5%
- C. 30%
- D. 40%

23. From the data below, what is the tax paid by an individual who earns \$36,000 a year? (HL Only)

Income tier	Tax rate (%)
\$8,000	0
\$8,001 - \$15,000	10
\$15,001 - \$35,000	20
\$35,001 and above	40

- A. \$5,100
- B. \$6,300
- C. \$8,400
- D. \$14,400

24. Suppose the first \$10,000 earned each year is not taxable, but any income over that amount is charged at a rate of 25%. What is the average tax rate of individuals that earn \$40,000? (HL Only)

- A. 10%
- B. 12%
- C. 18.75%
- D. 75%

25. If the marginal rate of tax in a country is 50% and an individual's income increased from \$30,000 to \$35,000, then the amount of tax paid will (HL Only)

- A. Equal \$17,500
- B. Equal \$2,500
- C. Increase by \$2,500
- D. Decrease by \$2,500

Chapter 28

2.4 Fiscal Policy – The government budget

Task 1 – True or False?

	True / False
a. Fiscal policy is the use of government taxation and government spending policies to influence the level of economic activity.	
b. Taxation is the main source of government revenues.	
c. Capital expenditure refers to the items of government spending for the short term.	
d. Transfer payments are included in the calculation of gross national product.	
e. Changes in income tax rates affect aggregate demand indirectly by changing the level of consumption.	
f. Discretionary fiscal policy aims to shift the short-run aggregate demand curve.	
g. Taxes can be categorized as either direct taxes or indirect taxes.	
h. Transfer payments occur when the private sector buys assets from the public (government) sector.	
i. Financing public sector debt is an example of government spending.	
j. A budget deficit occurs when the value of imports for a country exceeds the value of its exports.	
k. A budget surplus is more likely to occur in an economic boom.	

Task 2 – Explain...

a. Why budget deficits tend to occur during a recession.

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b. The three ways of categorizing government spending.

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c. The difference between a balanced budget and a budget surplus.

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6. The revenue from selling state-owned goods, such as public housing or utilities companies, to the private sector is known as
- A. Tax revenues
 - B. Privatisation proceeds
 - C. Public sector debt financing
 - D. Transfer payments
7. The recurring government spending on goods and services consumed within the present year is called
- A. Investment expenditure
 - B. Capital expenditure
 - C. Current expenditure
 - D. Transfer payments
8. Which of the following is not classed as capital expenditure?
- A. Purchasing capital equipment for state-owned enterprises
 - B. Purchasing raw materials for production
 - C. Building of new public roads
 - D. Construction of a new airport
9. Which of the following is not classed as current expenditure?
- A. State pension payments
 - B. Unemployment benefits
 - C. Wages and salaries for public sector workers
 - D. Foreign direct investment
10. All other things being equal, when government spending exceeds government revenue
- A. The economy contracts
 - B. There is a budget surplus
 - C. There is a budget deficit
 - D. Transfer payments increase

Chapter 29

2.4 Fiscal Policy – The role of fiscal policy

Task 1 – True or False? 👍 📄

	True / False
a. The purpose of expansionary fiscal policy is to increase real national income.	
b. Decreasing government spending is a form of contractionary fiscal policy.	
c. Progressive tax systems and unemployment benefits act as automatic fiscal stabilizers of short-term fluctuations in the economy.	
d. Spending on human capital formation is an example of expansionary fiscal policy.	
e. If the government chooses to use contractionary fiscal policy to combat cost-push inflation, unemployment is likely to rise.	
f. Government spending refers to current expenditure and excludes capital expenditure of the public sector.	
g. The value of tax revenues and government spending on unemployment benefits are both dependent on the level of economic activity.	
h. Changes in fiscal policy (taxation and government spending) do not directly influence the level of aggregate demand.	
i. Fiscal policy has a direct impact on aggregate demand and the level of economic activity.	
j. Austerity measures through the use of tight fiscal policy create incentives for firms to invest in the economy.	
k. Contractionary fiscal policy can be used to reduce an inflationary gap.	

Task 2 – Explain... 📄

a. How fiscal policy can be used to promote long-term economic growth.

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b. How expansionary fiscal policy can cause a 'crowding out' effect.

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c. How a progress tax system helps to automatically stabilize the economy.

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d. The difference between a deflationary (recessionary) gap and a reflationary gap.

e. Two ways in which fiscal policy can affect the level of aggregate demand.

f. With the aid of a diagram, how the effectiveness of expansionary fiscal policy depends on the shape of the aggregate supply curve.

Task 3 – Multiple Choice

1. A change in which of the following is not an example of fiscal policy

- A. Government spending on the National Defence
- B. Interest rates
- C. Import taxes
- D. The size of the budgets for education and health care

2. What set of fiscal policies could the government use to close an inflationary gap?

- A. Raise taxes, government spending and transfer payments
- B. Cut taxes alongside an increase in both government spending and transfer payments
- C. Raise taxes and transfer payments alongside cuts in government spending
- D. Raise taxes alongside cuts in both transfer payments and government spending

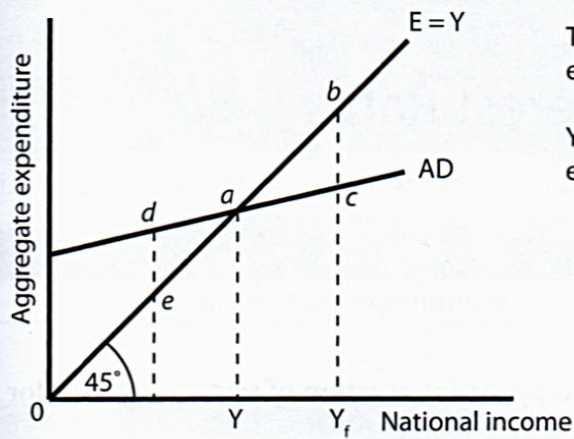
3. The effectiveness of any contractionary or expansionary fiscal policy depends on the value of the

- A. Interest rate
- B. Multiplier
- C. Price elasticity of demand for net exports
- D. Exchange rate

4. Which of the following is not a barrier to the effectiveness of fiscal policy?
- A. Political constraints
 - B. Supply-side shocks
 - C. Economic recession
 - D. Progressive tax systems
5. Which of the following is an example of expansionary fiscal policy?
- A. Higher corporation tax rates
 - B. Lower interest rates
 - C. Lower exchange rate
 - D. Increased government spending
6. As an economy grows, the value of the government's budget will automatically
- A. Improve in nominal terms
 - B. Improve in real terms
 - C. Worsen in nominal terms
 - D. Worsen in real terms
7. An automatic stabilizer refers to a
- A. Change in government spending aimed at boosting real national output
 - B. Change in taxation aimed at increasing real national output
 - C. Component of fiscal policy that automatically changes as real national output changes
 - D. Component of taxation that changes automatically with changes in the business cycle
8. Which of the following statements best describes discretionary fiscal policy?
- A. Government deliberately raising tax and reducing government spending policies to regulate real national income
 - B. The change in government spending and taxation policy to prevent a decline in the economy
 - C. The deliberate policy to cut government spending and raise taxes to reduce the budget deficit
 - D. The automatic reduction in tax revenues and government spending during a recession
9. Which statement outlines why a government might choose to impose taxes?
- A. To discourage consumption of goods with positive externalities
 - B. To redistribute income and wealth in the economy
 - C. To ensure it has a budget surplus
 - D. To create incentives to consume merit goods
10. The most likely reason for a government to deliberately have a budget deficit is in order to
- A. Stimulate the level of aggregate demand
 - B. Boost the level of net exports
 - C. To redistribute income and wealth
 - D. Reduce the general level of prices
11. Which of the following cannot be used to judge the effectiveness of fiscal policy?
- A. The effect on the efficient allocation of scarce resources
 - B. The effect on the distribution of income
 - C. The extent of macroeconomic stabilization
 - D. The extent to which a budget surplus is achieved

12. The payment of subsidies by the government is an example of
- Current expenditure
 - Capital expenditure
 - Transfer payments
 - Crowding out
13. Which of the following is not a limit on the effectiveness of fiscal policy?
- Crowding out
 - Time lags
 - The multiplier effect
 - Political constraints
14. A reduction in private-sector borrowing (and hence spending) that is caused by increased government borrowing (forcing interest rates to rise) is known as
- The multiplier effect
 - Financial crowding out
 - Fiscal stimulus
 - Deflationary gap
15. Which of the following is a constraint on fiscal policy?
- Time lags
 - Multiplier effects
 - Automatic stabilisers
 - Budget surpluses
16. Which statement does not explain why simply boosting aggregate demand by the same amount as the value of a deflationary gap does not restore macroeconomic equilibrium?
- An increase in aggregate demand is inflationary if the aggregate supply curve is not horizontal
 - An upwards sloping aggregate supply curve means aggregate demand must be boosted by more than the value of the deflationary gap to achieve full employment
 - Time lags can mean that macroeconomic equilibrium is not reached until much later, when other macro variable may have also changed
 - Fiscal stimulus equal to, or greater than, the deflationary gap can restore macroeconomic equilibrium through the multiplier effect
17. Contractionary fiscal policy least effective when aggregate supply is
- Horizontal
 - Vertical
 - Upwards sloping
 - Equal to aggregate demand
18. What can be used to close a recessionary gap?
- Expansionary fiscal policy
 - Deflationary fiscal policy
 - Contractionary fiscal policy
 - Discretionary fiscal policy

Questions 19 – 20 refer to the diagram below:



The Keynesian 45° line shows income (Y) equals expenditure (E).

Y_f represents the level of national income at full employment.

19. The distance between b and c represents the

- A. Multiplier effect
- B. Reflationary gap
- C. Deflationary gap
- D. Value of dis-savings

20. The distance between d and e represents the

- A. Multiplier effect
- B. Reflationary gap
- C. Deflationary gap
- D. Value of dis-savings

Chapter 30

2.5 Monetary Policy: Interest Rates

Task 1 – Complete the missing words...

The equilibrium rate of interest in the market for money is determined by the intersection of the for money curve and the of money curve. Any change in either of these variables will change the interest rate. For example, if the quantity of money demanded in the money market exceeds the money supplied, interest rates will, ceteris paribus. This will result in households and firms holding money as the opportunity cost of doing so will have, By contrast, if the money supply exceeds the demand for money, interest rates will tend to This will create a greater incentive to borrow money (as the opportunity cost falls) and less of an incentive to money.

Task 2 – Explain...

a. Three functions of a central bank.

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b. Why there is a structure of (different) interest rates in the economy.

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Task 3 - True or False?

	True / False
a. Monetary policy is not used to influence aggregate demand.	
b. Higher interest rates can be used to deal with an overheating economy.	
c. It is not possible to have negative interest rates.	
d. A central bank's ability to use interest rates to influence aggregate demand will be more effective if consumption and investment are interest inelastic.	
e. The higher the interest rate, the greater will be the demand for money demanded for transaction purposes (consumption expenditure).	

f.	The real rate of interest can be calculated by subtracting the rate of inflation from the nominal rate of interest.	
g.	The demand for money will increase if either prices or incomes increase.	
h.	An increase in the money supply will tend to lower the interest rate, thereby increase investment and gross domestic product.	
i.	Ceteris paribus, if the amount of money demanded in an economy exceeds the amount supplied, the interest rate will rise.	
j.	A change in the interest rate is more likely to affect investment expenditure than consumption expenditure.	

Task 4 – Multiple Choice

1. When the rate of inflation is higher than nominal interest rates
 - A. The real interest rate is negative
 - B. The real interest rate is positive
 - C. The nominal interest rate is negative
 - D. The real inflation rate is negative

2. Which of the statements below is correct about the opportunity cost of holding money?
 - A. It varies inversely with the level of interest rates
 - B. It varies proportionately with the level of interest rates
 - C. It varies directly with the level of interest rates
 - D. It varies proportionately with the supply of money

3. Interest rates will tend to rise when
 - A. The quantity of money demanded exceeds the quantity supplied
 - B. The quantity of money supplied exceeds the quantity demanded
 - C. The supply of money curve shifts to the right
 - D. The demand for money curve shifts to the left

4. An increase in nominal GDP will tend to
 - A. Reduce the demand for money
 - B. Increase the interest rate
 - C. Raise government borrowing
 - D. Reduce the money supply

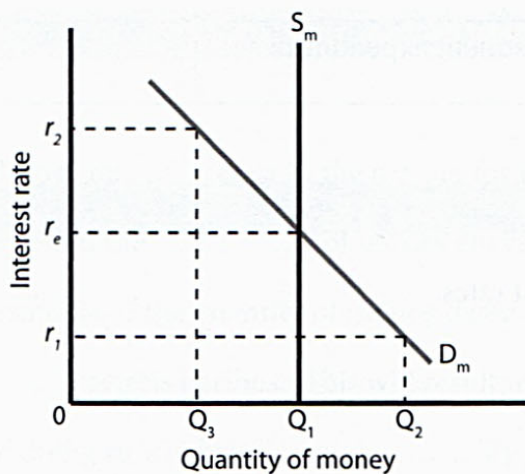
5. An increase in the money supply will tend to
 - A. Increase both interest rates and equilibrium national output
 - B. Increase interest rates and lower equilibrium national output
 - C. Decrease both interest rates and equilibrium national output
 - D. Decrease interest rates and increase equilibrium national output

6. Which of the following markets is most likely to be affected by an increase in interest rates?
 - A. Home furniture
 - B. Car manufacturing
 - C. Fast food restaurants
 - D. Residential property

7. Ceteris paribus, an increase in domestic interest rates will lead to

- A. An increase in the exchange rate
- B. A decrease in the exchange rate
- C. An increase in the money supply
- D. A decrease in net exports

Questions 8 – 10 refer to the diagram below.



8. Which statement explains why the supply of money (S_m) is vertical at Q_1 quantity of money?

- A. At any point in time, the supply of money is fixed by the central bank
- B. There is an inverse relationship between the money supply and the level of interest rates
- C. The supply of money is independent of the level of interest rates in the economy
- D. Excess demand or excess supply of money is restored to its equilibrium at r_e

9. Excess demand for money would exist at an interest rate of, shown by the distance

- A. r_2 and $Q_3 - Q_1$
- B. r_2 and $0 - Q_1$
- C. r_1 and $Q_1 - Q_2$
- D. r_1 and $Q_3 - Q_2$

10. At an interest rate of r_2

- A. More money is available than people wish to hold
- B. Less money is available than people wish to hold
- C. Inflation will set in
- D. There is excess demand for money

Monetary policy – the role of monetary policy

Task 1 – Vocabulary Quiz

Identify the correct key term from the clues below. *Hint:* all answers appear in alphabetical order.

Key term	Definition
	This public sector monetary authority (or reserve bank) oversees a country's banking system by managing its money supply and interest rates.
	This is the desire to hold money (rather than saving it) to finance spending.
	Also known as easy or loose monetary policy, this aims to expand money supply and boost aggregate demand mainly by keeping interest rates low.
	Refers to the practice of some central banks that aim for a specific rate of inflation, and using monetary policy to achieve this target.
	The return for lenders of money or the price of borrowing money, expressed as a percentage of the money loaned or borrowed.
	Refers to the use of interest rates and the money supply to affect the level of aggregate demand and economic activity.
	The entire quantity of a country's money circulating the economy at any point in time, including notes and coins, loans, credit and bank deposits.
	This contractionary demand-side policy aims to reduce consumption by raising interest rates or reducing the money supply.
	Variable delays between changes to monetary policy and their influence on the level of aggregate demand, national output and price inflation.

Task 2 – Explain...

a. How lower interest rates can affect the components of aggregate demand: $C + I + G + (X - M)$.

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b. The concept of negative real interest rates.

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c. How monetary policy might be used to influence economic activity.

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e.	The key role of monetary policy is to stabilise aggregate demand and national output.	
f.	Monetary policy does not directly determine rate of inflation, but influences it.	
g.	Monetary policy influences aggregate demand, rather than having a direct impact on the economy's long run aggregate supply.	
h.	A reduction in the tax imposed on profits made by banks is an example of expansionary monetary policy.	
i.	A rise in interest rates is most effective in achieving macroeconomic stability when the aggregate supply curve is perfectly price inelastic.	
j.	Monetary policy is generally more effective in combating demand-pull inflation than in getting an economy out of an economic depression.	
k.	Monetary policy is generally quicker and easier to implement than fiscal policy.	

Task 5 – Multiple Choice

1. Cutting interest rates at a time when the exchange rate is falling is likely to increase
 - A. Unemployment
 - B. Inflation
 - C. Aggregate demand
 - D. Government debt

2. Expansionary monetary policy will shift the
 - A. Aggregate supply curve to the left
 - B. Aggregate supply curve to the right
 - C. Aggregate demand curve to the left
 - D. Aggregate demand curve to the right

3. Which of the statements below does not apply to government bonds sold at a nominal price of \$1,000 with an interest rate of 2.5% per annum over a period of 10 years?
 - A. Each year, throughout the lifetime of the bond, the bond holder receives \$25 interest
 - B. The \$1,000 raised is a form of long term loan
 - C. The initial \$1,000 would be returned when the bond has matured in 10 years' time
 - D. The total interest received by the bondholder would exceed \$250 in 10 years' time

4. A cut in interest rates will tend to
 - A. Attract hot money inflows, thereby appreciating the exchange rate and reducing net exports
 - B. Increase consumer spending, due to lower borrowing costs, thus increasing aggregate demand
 - C. Increase savings as the opportunity cost of consumption rises, thus reducing national output
 - D. Cause deflationary effects on the economy as consumption and investment spending fall

5. Which of the following is least likely to be considered by the central bank when making a decision about interest rates in the economy?
 - A. The level of economic activity, such as household spending and investment expenditure
 - B. The level of inflation in the economy
 - C. Average earnings and the rate of growth of labour productivity
 - D. Its ability to mint (print) notes and coins

6. What is the likely result of interest rates being set too low
 - A. The supply of money will exceed the demand for money
 - B. The emergence of inflationary pressures
 - C. The emergence of a deflationary gap
 - D. National output is likely to be unnecessarily low

7. What would occur if interest rates are kept low when the economy is operating on the vertical part of its aggregate supply curve?
 - A. Economic downturn
 - B. Financial crowding out
 - C. Inflation
 - D. Unemployment

8. Which type of income is automatically reduced if interest rates are raised?
 - A. Nominal income
 - B. Real income
 - C. Disposable income
 - D. Discretionary income

9. Which of the following is not a constraint on the effectiveness of monetary policy?
 - A. Consumer spending is not solely determined by interest rates
 - B. Investment spending is not solely determined by interest rates
 - C. The position of the aggregate supply curve, namely the horizontal and vertical sections
 - D. The compliance of commercial banks in changing their interest rates

10. Assuming that the economy operates at less than the full employment level, easy monetary policy will tend to cause interest rates to and aggregate demand to
 - A. increase; decrease
 - B. increase; increase
 - C. decrease; increase
 - D. decrease; decrease

11. Ceteris paribus, a decrease in the money supply will tend to the interest rate and subsequently national output.
 - A. increase; decrease
 - B. increase; increase
 - C. decrease; increase
 - D. decrease; decrease

12. Ceteris paribus, a contraction of the money supply will tend to reduce
 - A. Aggregate demand
 - B. Interest rates
 - C. The exchange rate
 - D. Import expenditure

13. Ceteris paribus, a tight monetary policy during a period of demand-pull inflation will tend to increase
- A. Net exports
 - B. Investment
 - C. Interest rates
 - D. Aggregate demand
14. Monetary policy may be preferred to fiscal policy because it
- A. Can be implemented more quickly and decisions are reversible
 - B. It affects the demand-side of the economy rather than the supply-side
 - C. Does not affect the net export component of aggregate demand
 - D. Restricts the ability of commercial banks to lend and borrow money
15. Which of the following is not an example of tight monetary policy?
- A. Raising interest rates
 - B. Raising corporation tax rates
 - C. The sale of government bonds
 - D. Raising the commercial bank reserve requirement

Chapter 32

Supply-side policies – The role of supply-side policies

Task 1 – Matching exercise

a. Match the key term with the correct explanation:

Key term	Definition
1. Supply-side policies	a. Land, labour, capital and entrepreneurial resources used in the production process.
2. Interventionist supply-side policy	b. These policies focus on freeing up markets and improving market incentives to increase aggregate supply
3. Market-based supply side policy	c. The productive capacity (or potential output) of an economy, as shown on its production possibility curve (PPC)
4. Potential output	d. These policies aim to productive capacity of the economy by boosting the quality and/or quantity of factor of production
5. Institutional framework	e. These policies are deliberate attempts by the government to overcome market imperfections in the economy.
6. Factors of production	f. Refers to the productive capacity of the economy if all resources are used efficiently.
7. Long run aggregate supply	g. The system of established structures and context that affect economic behaviour, e.g. culture and the legal framework

b. Identify whether the examples below are cases of market-based supply-side policies or interventionist supply-side policies by placing a tick (ü) in the correct column.

Example	Market-based	Interventionist
i. Government retraining programmes to improve the mobility of those suffering from structural unemployment		
ii. Government reducing the power of trade unions in the labour market		
iii. Reducing the national minimum wage to reduce labour inflexibilities		
iv. Privatisation of state-owned enterprises		
v. Income tax reforms to improve incentives to work		
vi. Government funding of research and development		
vii. Government funding of transport infrastructure programmes		
viii. Trade liberalization policies		
ix. Tax credits or rebates to encourage foreign direct investment		
x. Providing subsidies to encourage firms to relocate to regions with higher unemployment		

Task 2 – Explain...

a. Two advantages of using supply-side policies to achieve macroeconomic objectives.

b. Two examples of supply-side policies.

Task 3 – True or False?

	True / False
a. Long-run economic growth can only be achieved through an increase in the economy's aggregate supply.	
b. Both interventionist and market-based supply-side policies aim to shift the long run aggregate supply to the right, thereby boosting potential output.	
c. Supply-side policies can be used to increase potential output in the economy.	
d. Supply-side economists argue that boosting aggregate supply will raise national output at the cost of higher price levels.	
e. An example of a supply-side policy is government spending on education and training to improve the economy's human capital.	
f. Subsidies and tax concessions are two examples of supply-side policies used to protect infant industries from larger, more established foreign competitors.	
g. The provision of better communication in the job market to reduce unemployment is an example of market-based supply-side policies.	

Task 4 – Multiple Choice

1. Market-based supply-side policies do not include

- A. Tax cuts
- B. Privatisation of state-owned assets
- C. Deregulation
- D. Government provision of transport infrastructure

2. Granting subsidies to firms to create an incentive to locate in less prosperous regions of the country would be an example of

- A. Loose monetary policy
- B. Contractionary fiscal policy
- C. Market-based supply-side policies
- D. Interventionist supply-side policies

3. Which statement does not apply to supply-side policies?
 - A. Macroeconomic policies aimed at improving the ability of the economy to increase its aggregate supply of goods and services
 - B. Designed to make the economy more productively efficient in the long run
 - C. Used to increase the productive potential of the economy
 - D. The use and manipulation of interest rates to affect the level of economic activity

4. Spending on education and training to reduce labour immobility is an example of
 - A. Tight monetary policy
 - B. Tight fiscal policy
 - C. Market-based supply-side policies
 - D. Interventionist supply-side policies

5. Market-based supply-side policies strive to
 - A. Make the labour market more responsive to changes in demand and supply
 - B. Change income and corporation taxes to manipulate the level of economic activity
 - C. Increase social welfare benefits
 - D. Eliminate all labour market imperfections

6. Which group of economists argue that the underlying problems with labour market imperfections are high rates of income tax and regulations that reduce the incentives to work?
 - A. Supply-side economists
 - B. Keynesian economists
 - C. Protectionists
 - D. Interventionists

7. Which of the following is a supply-side policy used to reduce unemployment?
 - A. Reduce welfare benefits to the unemployed and single parents
 - B. Privatisation of state-owned assets
 - C. Regulation of the financial sector
 - D. Reduced interest rates to stimulate economic activity

8. Privatisation is the transfer of
 - A. Private sector assets to the public sector
 - B. State-owned assets to the private sector
 - C. Sales of private sector assets
 - D. Income from the private sector to the public sector

9. The institutional framework of an economy does not include
 - A. Informal conventions
 - B. The legal system
 - C. Norms and cultural habits (customs)
 - D. Policies to improve competition in the economy

10. An increase in which of the following does not shift the long run aggregate supply curve to the right?

- A. The quantity of factors of production
- B. The quality of factors of production
- C. The financial return to the factors of production
- D. Investment expenditure in both human and physical capital

Chapter 33

Supply-side policies – Interventionist supply-side policies

Task 1 – Explain...

a. The importance of human capital in contributing to the economic development of a country.

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b. The importance of investment in new technology in contributing to the economic development of a country.

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c. The importance of investment in infrastructure in contributing to the economic development of a country.

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d. The importance of industrial policies in contributing to the economic development of a country.

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Task 2 – True or False?

	True / False
a. Investment in training and education will have a short term impact on aggregate demand but a long term effect on aggregate supply.	
b. Supply-side labour policies are those that create incentives to work and increase the tendency of workers to accept jobs.	
c. Government grants and subsidies to firms that hire youth workers, mature staff and those in long-term unemployment are supply-side labour policies.	
d. Investment in the infrastructure of a country has no effect on aggregate demand in the short term, but increases the long run aggregate supply.	
e. Investment in education and training will always lead to an increase in the productive capacity of the economy.	
f. Government intervention in labour markets tries to enhance the appeal (demand) and availability (supply) of labour.	
g. Industrial policies aim to target structural change in specific industries, such as subsidizing export industries or protecting the agricultural industry.	

h. Subsidized loans targeted at specific industries is an example of industrial policy so can shift the long run aggregate supply curve outwards to the right.

Task 3 – Multiple Choice

1. An increase in which of the following is least likely to shift the long run aggregate supply curve of an economy to the right?
 - A. Investment in education
 - B. Investment on infrastructure
 - C. Public sector spending
 - D. Spending on research and development

2. Which of the following is not a supply-side policy involving investment in human capital?
 - A. Schemes to increase labour mobility
 - B. Policies aimed at promoting job opportunities and growth in specific industries
 - C. Investment expenditure in education
 - D. Subsidising training programmes for small and medium sized businesses

3. The productivity of labour in an economy does not automatically increase by
 - A. Raising the skills base of labour
 - B. Reducing the search costs of employment
 - C. Creating incentives to improve labour mobility
 - D. Increasing the population size

4. Which supply-side policy is least likely to have an impact on aggregate demand in the short run?
 - A. Tax breaks aimed at specific firms in a certain industry
 - B. Government spending on infrastructure
 - C. Investment in human capital
 - D. Investment in new technology

5. Which of the following is not a labour supply-side policy?
 - A. Government investment in research and development projects
 - B. Government spending on relocating the unemployed to regions with job opportunities
 - C. Offering subsidized loans to business start-ups
 - D. Investment in government education and training programmes for redundant workers

6. Interventionist supply-side policies include
 - A. Deregulation and privatization
 - B. Trade liberalization
 - C. Reduction in labour union power
 - D. Investment in human capital

7. Which interventionist supply-side policy is aimed at encouraging the development and growth of the manufacturing sector of an economy?
 - A. Investment in human capital
 - B. Investment in new technology
 - C. Spending on infrastructure
 - D. Industrial policy

8. Investment in a country's infrastructure does not include spending money on
- A. Transportation networks
 - B. Telecommunications networks
 - C. Sewage systems
 - D. Research and development
9. Which statement about industrial policy is incorrect?
- A. It includes temporarily imposing trade barriers on key sectors of industry, such as manufacturing
 - B. It includes the use of tax breaks and tax cuts aimed at specific industries
 - C. It includes improving the geographical and occupational mobility of labour
 - D. It is harmful if the government lacks the necessary information to promote certain sectors of industry
10. Which of the following statements do not apply to investment in new technology?
- A. It involves encouraging spending on research and development
 - B. It has no impact on aggregate demand, but shifts aggregate to the right
 - C. Funding for maths, science and technology education is an example of such investment
 - D. It includes permitting tax credits for firms that invest in research and development

Supply-side policies – Market-based supply-side policies

Task 1 – Matching exercise

Match the twelve economics term with the correct explanation:

Terminology	Definition
1. Anti-monopoly regulation	a. The reduction or removal of government rules and directives in an industry, to create more competition and efficiency.
2. Capital gains tax	b. Driving forces that motivate people to seek employment opportunities, such as lower rates of personal income tax.
3. Deregulation	c. Competition law that controls or limits the restrictive practices and market power of dominant firms in an industry.
4. Incentives to work	d. The sale and transfer of public-sector assets, such as state-owned enterprises, to the private sector.
5. Labour market reforms	e. The delay between a change in economic policy, such as supply-side policy, and it having an effect on the economy.
6. Labour unions	f. Levy charged on the profit made from the sale of an asset such as shares, land and property.
7. Minimum wage	g. Welfare payments made to support those who are willing but cannot find employment.
8. Personal income tax	h. The reduction or removal of trade barriers, such as tariffs and subsidies, on free international trade between nations.
9. Privatization	i. Organizations that are legally recognized as representatives of workers, thereby act in the best interest of their members.
10. Time lags	j. Measures developed to create greater labour market flexibility and efficiency, e.g. changes to labour union laws.
11. Trade liberalization	k. The lowest hourly rate of pay that firms must pay to their employees, as governed by labour market laws.
12. Unemployment benefits	l. A form of direct tax levied on the total earnings of an individual after certain tax allowances are considered.

Task 2 – True or False? 🙋 🙋

	True / False
a. Interventionist labour supply-side policies do not necessarily improve income distribution in the economy.	
b. Privatization of state-owned enterprises is in the best interest of the public.	
c. A flexible workforce is one that is responsive to changes in demand and supply factors in the labour market.	
d. Reducing indirect taxes for those earning low incomes can create incentives to seek and accept employment opportunities.	

e.	Lowering labour union power and decreasing the national minimum wage help to reduce labour market imperfections.	
f.	There is a positive correlation between the rates of business taxes and the level of investment in the economy.	
g.	Supply-side policies that increase the level of economic activity can create greater disparities (inequalities) in income distribution.	
h.	A key drawback of supply-side policies is the ability to create employment opportunities but at the cost of higher inflation.	
i.	Reducing the rate of capital gains tax can create incentives for investment in the economy.	

Task 3 – Multiple Choice

- Which of these supply-side policies is not aimed primarily at increasing competition in an economy?
 - Industrial policy
 - Deregulation
 - Privatization
 - Trade liberalization
- Which of the following is not an example of labour market reform?
 - Reducing the power of labour unions (trade unions)
 - Reducing unemployment benefits
 - Abolishing or reducing the national minimum wage
 - Tax cuts to create incentives to work
- Which of the following is not part of market-based supply-side policies?
 - Removing market imperfections such as excessive trade union power
 - Removing restrictive trade practices of monopolies and oligopolies
 - Creating incentives to work by establishing the most efficient rates of direct tax
 - Increasing the investment in a country's infrastructure to boost its productive capacity
- Which of the following is not an example of trade liberalization?
 - Allowing the free movement of capital flows
 - Reducing tariffs barriers to free trade
 - Removing imperfections in the labour market
 - Encouraging foreign direct investment
- What is the primary role of a trade union?
 - Push for higher wages for workers
 - Represent members in disciplinary matters
 - Uphold the welfare of its members
 - Negotiate contracts with employers for its members

6. Which of the following is an example of a labour market reform?
- A. Reducing the lower tax band to increase incentives to look for and accept employment opportunities
 - B. Raising the upper rate of capital gains tax
 - C. Investment in education and training
 - D. Trade liberalization policies that encourage greater competition in a particular industries
7. Market-based supply-side policies are most likely to be concerned with
- A. Increasing employment opportunities in the long run
 - B. Controlling the long run trend rate of inflation
 - C. Improving the long run trend rate of economic growth
 - D. Increasing the level of human capital via education and training
8. Which of the following is a market-based supply-side policy designed to reduce the level of unemployment?
- A. A cut in interest rates to stimulate economic growth in the economy
 - B. A rise in the budget for unemployment benefits
 - C. A cut in the basic rate of personal income tax
 - D. Abolishing the minimum wage in an attempt to create incentives to work
9. Labour market reforms to increase labour market flexibility and efficiency cannot be achieved by
- A. Removing the national minimum wage
 - B. Reducing unemployment benefits
 - C. Increasing subsidies paid to strategic industries
 - D. Reducing the power of labour unions
10. Limitations of using market-based supply-side policies to increase the level of economic activity do not include
- A. Inflationary pressures
 - B. The negative impact on the natural environment
 - C. Time lags
 - D. Pressure of the government's budget

Chapter 35

3.1 International trade - Free trade

Task 1 – Vocabulary Quiz

Identify the correct terminology from the clues below. *Hint: answers appear in alphabetical order.*

Key term	Definition
	This occurs when a country can produce or supply a product more efficiently and productively than another country, thereby benefiting from lower costs of production. <i>(HL Only)</i>
	This exists when one country can produce a given amount of output with fewer inputs than another country. <i>(HL Only)</i>
	The cost-savings benefits of operating on a larger basis, such as the ability of multinational corporations to purchase their raw materials in large bulk.
	The quantity and quality of factors of production available, including its natural resources and human capital. <i>(HL Only)</i>
	This occurs when countries can exchange goods and services without any form of artificial barrier or government intervention.
	The organization set up to promote trade liberalization, oversee multilateral trade agreements and resolve trade disputes between its members.

Task 2 – Explain...

a. How free trade allows firms to enjoy economies of scale.

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b. Why increased competition is an argument in favour of free international trade.

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c. Three benefits of (or gains from) trade.

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d. What Benjamin Franklin meant by his statement that "no nation was ever ruined by trade".

Task 3 - True or False? 👍 👎

	True / False
a. The model of free trade assumes that switching between factor inputs does not incur a loss in economic efficiency due to factors mobility.	
b. Consumers tend to have a lower propensity to import as their disposable income rises.	
c. Countries tend to specialise in producing products where unit labour costs are highest due to the subsequent higher quality output.	
d. Free trade is economically beneficial because it encourages an efficient allocation of the world's scarce resources.	
e. An advantage of trade is the potential for greater economies of scale.	
f. Free international trade helps to increase the opportunity cost of anti-competitive behaviour and cross-border wars.	
g. Free trade improves the welfare of all members of society.	
h. A country is said to have a comparative advantage in the output of a product if its marginal cost of production is lower than that of another country's. (HL Only)	
i. It is not possible for a country to have a comparative advantage in the production of everything it produces. (HL Only)	
j. A weakness of comparative advantage theory is that it assumes comparative advantage for a country is fixed, whereas in reality it is not. (HL Only)	
k. Fluctuations in exchange rates have no influence on a country's comparative advantage. (HL Only)	
l. Countries which are well-endowed in natural resources will tend to have a comparative advantage in products using those resources. (HL Only)	
m. If a country has a comparative advantage in the output of a product, this means it gives up less of resources than other countries in producing a unit of that product. (HL Only)	
n. The gains from trade based on comparative cost advantages assume that there are no barriers to international trade (so is a weakness of the theory). (HL Only)	

Task 4 – Multiple Choice

1. Which of the following is not an assumption of the theory of (benefits of) free trade?

- A. No externalities in production
- B. No transportation costs
- C. Occupational mobility
- D. Economies of scale

2. A limitation of free international trade is
 - A. Deregulation and trade liberalization
 - B. The use of non-price competition
 - C. Official financial support for certain domestic industries
 - D. Foreign exchange rates

3. Which of the following is not a static gain from free trade?
 - A. Improvements in allocative efficiency
 - B. Improvements in productive efficiency
 - C. Welfare gains
 - D. Lower short-run average costs

4. International trade based on the principle of comparative advantage helps to improve
 - A. The efficient allocation of scarce resources
 - B. Political and economic cooperation
 - C. Consumer and producer confidence levels
 - D. The balance of payments

5. One of the key objectives of the World Trade Organisation (WTO) is to
 - A. Promote a system of fixed exchange rates to encourage trade
 - B. Reduce the general level of protectionism
 - C. Provide loans for countries facing balance of payments deficits
 - D. Provide financial aid and advice to emerging economies

6. Which of the following is not a function of the WTO?
 - A. Act as an arbitrator between member countries in trade disputes
 - B. Encourage free international trade
 - C. Ensure that trade concessions granted to one member state is equally granted to all other member states
 - D. Promote international monetary cooperation

7. As an economy develops, it can be observed that the country
 - A. Exports more services
 - B. Gains a large trade surplus on its balance of payments
 - C. Imports less services
 - D. Imports less goods

8. Which statement about free trade is incorrect?
 - A. It promotes a more efficient allocation of the world's scarce resources
 - B. It increases competition thereby creating choice for consumers
 - C. It can reduce structural unemployment caused by business relocations
 - D. It can create more employment opportunities through economic growth

9. Which statement does not apply to the WTO?
 - A. Member states do not subscribe to using subsidies to artificially reduce production costs
 - B. It acts to settle trade disputes in a relatively quick and objective manner
 - C. It seeks to expose domestic monopolies to external competition by encouraging free trade
 - D. It regulates trade and tariffs around the world for its members

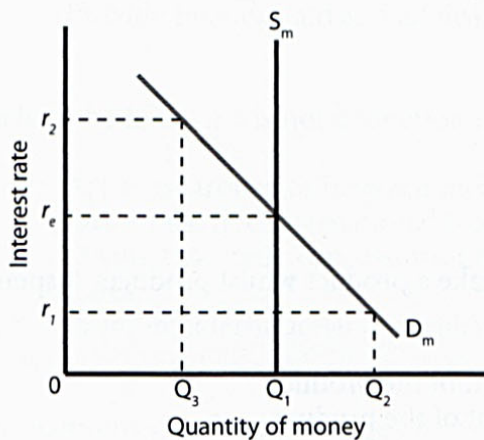
10. Which statement does not explain why countries need to trade?
- A. Scarce resources are unevenly distributed among countries
 - B. Goods and services are produced using different resources and technologies
 - C. Goods and services are produced from the same combinations of resources
 - D. Different nations have different factor endowments

Task 5 – Multiple Choice – Comparative and Absolute advantage (HL Only)

1. The benefits of free trade are based on which economic principle?
- A. Absolute advantage
 - B. Comparative advantage
 - C. Economies of scale
 - D. Economic development
2. What is said to exist when one country has a lower opportunity cost of production for a given item than another country?
- A. Absolute disadvantage
 - B. Absolute advantage
 - C. Comparative disadvantage
 - D. Comparative advantage
3. The ability to produce more of a good or service than competitors using the same amount of resources is known as
- A. Absolute advantage
 - B. Comparative advantage
 - C. Economic efficiency
 - D. Allocative efficiency
4. Which statement is correct if producer A spends \$10 to make a product whilst producer B spends \$8 to make the same product?
- A. Producer A has an absolute advantage in the output of the product
 - B. Producer B has an absolute advantage in the output of the product
 - C. Producer A has a comparative advantage in the output of the product
 - D. Producer B has a comparative advantage in the output of the product
5. Which of the following is not a criticism of the model of comparative advantage?
- A. It assumes that opportunity cost is static (constant)
 - B. It does not allow for uncertainty and risk (common in the real world)
 - C. The model ignores the disparities of who gains from trade
 - D. The model fails to explain the gains from trade
6. China has a comparative advantage in the production of motor vehicles compared to the USA if
- A. China can produce more cars than the USA
 - B. The USA can produce motor vehicles at a lower opportunity cost than China
 - C. The opportunity cost of car production is lower in China than in the USA
 - D. The variable costs of production are lower in China than in the USA

7. Which of the following is not an assumption of comparative advantage?
- Perfect mobility of resources, i.e. factors of production used in one particular industry can be switched for use in another industry without any loss of efficiency
 - Economies of scale, i.e. if countries specialise, the potential financial gains from trade are much greater
 - There are no external costs or benefits that arise from production and/or consumption
 - Transportation costs are not taken into account
8. A change in which of the following factors is least likely to cause a change in a country's comparative advantage?
- Inflation rate
 - Exchange rate
 - Investment in research and development
 - The level of economic activity
9. A country with a comparative advantage in the output of a product should
- Produce the product for domestic consumption
 - Import the product
 - Produce the product and export it
 - Take into account the externalities involved in its production and/or consumption

Questions 10 and 11 refer to the diagram below.



10. According to the information in the diagram (figures in '000 tons), which statement is incorrect?
- The USA should specialize in, and export, grapes
 - The USA has an absolute advantage in the production of both corn and grapes
 - If France produces grapes, the opportunity cost if both countries trade is 10m tons of corn
 - As the USA can produce more of both products, there is no benefit in trading with France
11. What is the opportunity of 1,000 ton of grape production in terms of corn production for the USA?
- 5,000 tons
 - 50,000 tons
 - 500,000 tons
 - 10,000,000 tons

Questions 12 – 13 refer to the following production possibilities for two countries producing two products:

	Morganics (units)	Spanny (units)
Keithland	800	0
	0	10,000
Philand	400	0
	0	8,000

12. Which statement is correct?

- A. Morganics should be produced by Philand
- B. Philand has an absolute advantage in the production of Spanny
- C. Keithland's opportunity cost of producing one unit of Spanny is 0.08 units of Morganics
- D. Philand's opportunity cost of producing one unit of Morganics is 12.5 units of Spanny

13. What is the opportunity cost of producing 8 units of Morganics, in terms of Spanny, for Philand?

- A. 20 units
- B. 80 units
- C. 100 units
- D. 160 units

14. What conclusion can be drawn from the data below?

Country	Jukes (units)	Satcoles (units)
Australia	2,600	800
Vietnam	1,200	400

- A. Vietnam should specialise and export Jukes
- B. Australia should specialise and export Jukes
- C. Australia should specialise and export Satcoles
- D. Australia will not trade with Vietnam as it has an absolute advantage in the production of both Jukes and Satcoles

15. What are the gains if the two countries below trade with one another?

Country	Drinks (units) and Food (units)
Tonina	500 and 1,500
Phoebeli	600 and 2,400

- A. If Tonina specialises in only producing drinks and Phoebeli gives up 400 units of drinks, then there are gains from trade
- B. If Phoebeli specialises in only producing drinks and Tonina gives up 400 units of drinks, then there are gains from trade
- C. If Tonina specialises in only producing drinks and Phoebeli specialises in only producing food, then there are net gains from trade
- D. If Phoebeli specialises in only producing drinks and Tonina specialises in only producing food, then there are net gains from trade

Chapter 36

3.1 International trade – Trade protection

Task 1 – Complete the missing words

Protectionism refers to the act of imposing trade barriers to safeguard domestic producers from competition. The most common form of protectionism is the imposition of This raises the curve vertically by the amount of tax placed on imports due to the higher costs of production. They are also a form of expenditure-..... policy, aimed at encouraging consumers to purchase domestic products.

Administrative obstacles (often referred to as ‘..... tape’) refer to governments controls and policies that make it onerous for importers to sell their products in overseas markets. Examples include the use of excessive quality controls and safety regulations.

A key argument against the use of protectionism is that it distorts the market allocation of resources. Hence, the economy does not allocate scarce resources to their best use, meaning the economy does not achieve economic For example, domestic consumers pay higher prices due to protectionist measures such as tariffs and placed on foreign imports. Consumers often lose out from protectionism due to higher prices, reduced choice of goods and services and (sometimes) lower quality products from suppliers.

Task 2 – Vocabulary Quiz

Identify the key term from the given definitions. *Hint:* the answers appear in alphabetical order.

Key term	Definition
	This refers to policies and processes that increase the costs of production and/or reduce market accessibility of firms trying to compete in overseas markets.
	The protectionist act of exporting a product to another country at a price that is artificially low, i.e. below the price charged in the domestic market or is set below the costs of production.
	An extreme form of protectionism, this is a total ban on the trade of a certain product or trade with a certain country.

Refers to the act of erecting barriers to international trade to safeguard the domestic economy.

A form of protectionism that sets quantitative limits on imports per time period, such as 20 Hollywood movies allowed into China each year.

Government support, usually using financial aid, to domestic firms to help lower their production costs, thereby raising domestic output and competitiveness.

An ad-valorem or specific tax that is imposed on imported goods.

This is a bilateral or multilateral agreement between countries to deliberately export less to allow a country to compete more effectively against more efficient foreign producers.

Task 3 – Explain...

a. How 'health and safety standards' act as a barrier to trade.

b. How protectionism can help sunrise (infant) industries in the domestic economy.

c. Why dumping is regarded as unfair by the World Trade Organization.

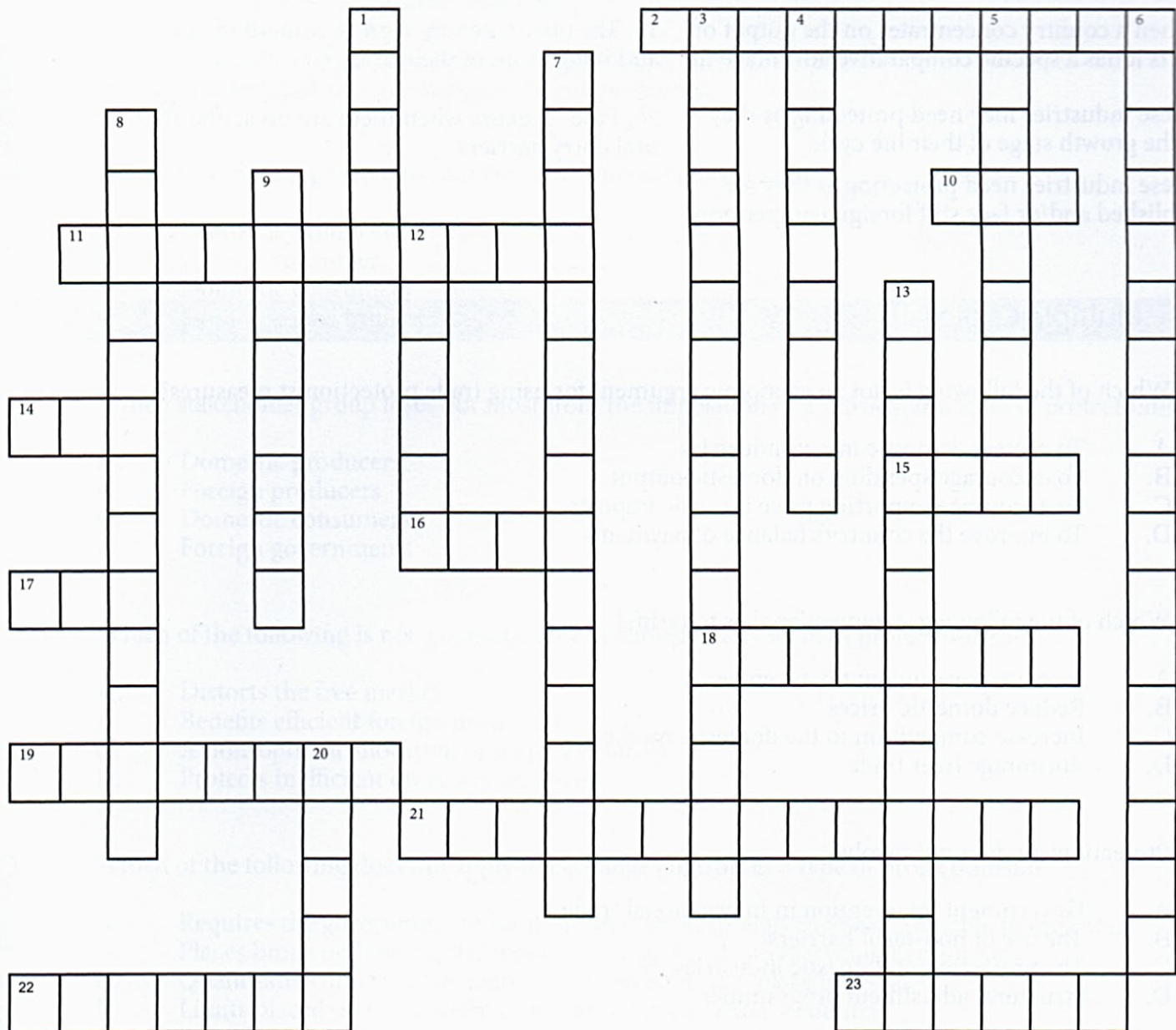
d. How protectionist measures can help to rectify a balance of payments disequilibrium.

Task 4 - True or False?

	True / False
a. Tariffs are the most common form of barrier to free trade.	
b. Tariffs are effective in reducing imports when the price elasticity of demand for imports is inelastic.	
c. Most economists agree that the benefits of free trade exceed the benefits of protectionism.	
d. Whilst protectionism provides short run benefits for a country, it tends to be detrimental to economic prosperity in the long run.	

e.	Subsidies are often used to protect sunset industries.	
f.	Embargoes are an extreme form of barrier to trade.	
g.	An ad valorem tariff imposes a specific amount of tax on imported products.	
h.	The imposition of a tariff creates a loss in consumer surplus, a gain in domestic producer surplus and a welfare loss.	
i.	Protection of domestic employment can be a justified argument for imposing protectionist measures.	
j.	Protectionism can lead to monopoly power because domestic firms can earn supernormal profits.	

Task 5 – Crossword: International trade and Protectionism



Clues across

2. Occurs when other countries react to trade barriers by setting their own entry barriers
10. International trade should help to increase this (the annual output of an economy)
11. Countries have this advantage if they can produce products at a lower opportunity cost
14. Corporations that operate in two or more countries thereby contributing to globalization
15. A trading ... consists of member countries that agree to abolish trade barriers with each other
16. The benefits of comparative advantage are based on the concept of ... trade
17. The institution, founded in 1995, that promotes and oversees free international trade
18. Form of protectionism that reduces the costs of production for domestic suppliers and producers

Clues down

1. A quantitative limit used as a protectionist measure on international trade
3. Cost-saving benefits of increased output which acts as a driving force for international trade
4. A type of tariff that places a percentage tax on imported goods
5. The process of buying and selling
6. Refers to any form of barrier to trade other than the use of tariffs
7. Globalization has led to greater ... of economies
8. Ways to defend a country from too much foreign trade and competition

9. These prevent or limit foreign competition

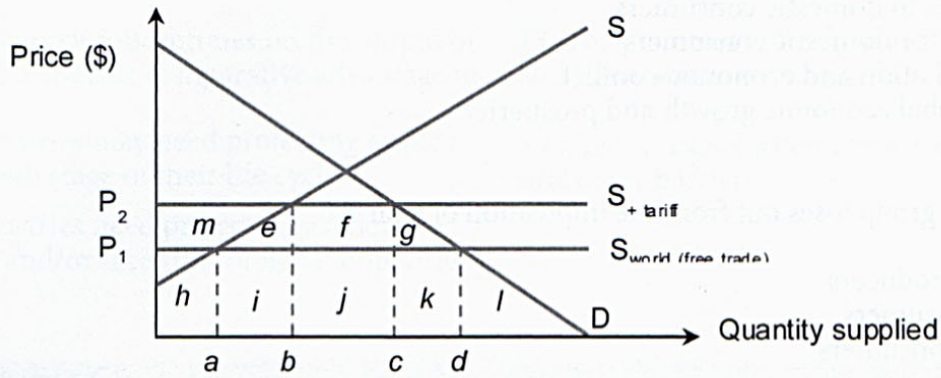
19. This advantage occurs when a country can unconditionally produce more than other countries
20. Free ... exists when there are no artificial or natural entry barriers
21. When a country concentrates on the output of products it has a specific comparative advantage in
22. These industries may need protecting as they are in the growth stage of their life cycle
23. These industries need protecting as they are unestablished and/or face stiff foreign competition
12. The most common type of protectionism
13. The phenomenon of greater interdependence and integration of the world's economies

Task 6 – Multiple Choice

1. Which of the following is not an economic argument for using trade protectionist measures?
- A. To protect domestic infant industries
 - B. To encourage spending on domestic output
 - C. To encourage importing price inelastic imports
 - D. To improve the country's balance of payments
2. Which of the following statement applies to tariffs?
- A. Increase government tax revenues
 - B. Reduce domestic prices
 - C. Increase competition to the domestic market
 - D. Encourage freer trade
3. Protectionism does not involve
- A. Government intervention in international trade
 - B. The use of non-tariff barriers
 - C. The protection of domestic industries
 - D. Structural adjustment programmes
4. A quota is a
- A. Quantitative limit on imports
 - B. Qualitative limit on imports
 - C. Windfall gain for exporters
 - D. Form of efficiency gain for domestic producers
5. An argument against using protectionist measures is the
- A. Inefficient allocation of scarce resources
 - B. Costs of short-run protectionist measures
 - C. Lower world prices of goods and services to consumers
 - D. Infant industry argument
6. A subsidy is
- A. A payment from the government to producers to reduce their costs of production
 - B. a raise in the relative price of domestic goods
 - C. Used to promote sunset industries
 - D. Paid to all services that exert positive externalities

7. Which of the following statements is not a valid argument against the use of tariff barriers?
- A. Lower prices to domestic consumers
 - B. Less choice for domestic consumers
 - C. Causes retaliation and economic conflict
 - D. Hinders global economic growth and prosperity
8. Which stakeholder group loses out from the imposition of a tariff?
- A. Domestic producers
 - B. Foreign consumers
 - C. Domestic consumers
 - D. Domestic government
9. Which stakeholder group loses out most from the imposition of a subsidy as a form of protectionism?
- A. Domestic producers
 - B. Foreign producers
 - C. Domestic consumers
 - D. Foreign governments
10. Which of the following is not a consequence of subsidies as a form of protectionism?
- A. Distorts the free market
 - B. Benefits efficient foreign producers
 - C. A non-optimal allocation of scarce resources
 - D. Protects inefficient domestic producers
11. Which of the following does not apply to exchange controls as a type of protectionism?
- A. Requires the government to limit the amount of foreign currency available to importers
 - B. Places limits on how much foreign exchange holidaymakers can take abroad
 - C. Quantitative limits on the amount that investors can place overseas
 - D. Limits placed on the amount of imports that can enter a country
12. Dumping does not lead to
- A. Reduced aggregate demand in the foreign country
 - B. Lower sales and profits for domestic firms
 - C. Reduced domestic unemployment
 - D. Worsening balance of payments on the current account for the foreign country
13. Which of the following is a likely long-run cost of protectionism?
- A. Lower priced imports as foreign firms retaliate
 - B. Imported inflation
 - C. Higher prices in the domestic market
 - D. A balance of payments deficit
14. Which option does not explain why free market economists are against protectionism?
- A. Detrimental effects on the balance of payments current account
 - B. Worsening terms of trade
 - C. Increased unemployment
 - D. Higher taxation revenues

Questions 15 – 18 refer to the tariff diagram below:



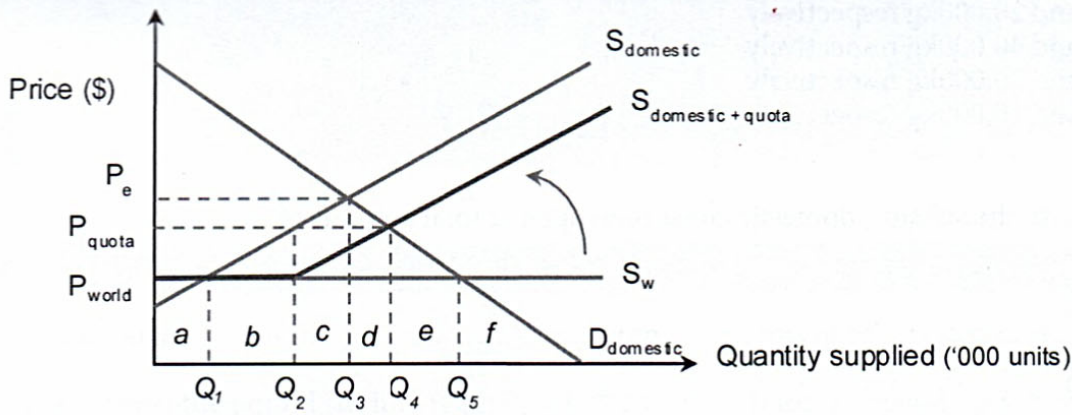
15. Following the imposition of a tariff, the revenue earned by the government is equal to
 - A. j
 - B. i,j,k,l
 - C. f,j
 - D. f

16. Following the imposition of a tariff, the loss in consumer surplus is shown by the area(s)
 - A. m
 - B. e,g
 - C. m,e,f,g
 - D. h,i,j,k,l

17. The welfare loss as a result of the imposition of a tariff is shown by the areas
 - A. e,g
 - B. e,f,g
 - C. e,i,g,k
 - D. m,e,f,g

18. The value of consumer expenditure on imports following the imposition of the tariff is shown by
 - A. f, j
 - B. e,f,g
 - C. i,j,k
 - D. e,i,g,k

Questions 19 – 21 refer to the trade quota diagram below:



19. Without the imposition of a quota, the revenue earned by foreign firms is shown by the areas

- A. a, f
- B. c, d
- C. b, c, d, e
- D. a, b, c, d, e, f

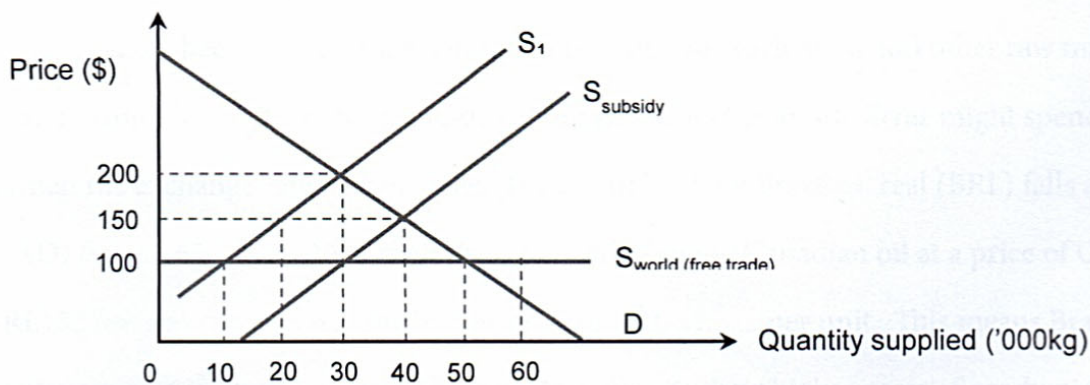
20. The size of the quota is shown by the difference between

- A. Q_1 and Q_2
- B. Q_2 and Q_3
- C. Q_2 and Q_5
- D. Q_3 and Q_4

21. Consumers lose out from the quota being imposed because

- A. Supply increases from S_{domestic} to $S_{\text{domestic} + \text{quota}}$ but without a fall in price
- B. They could previously purchase Q_5 but can only buy Q_4 at a higher price at P_{quota}
- C. Price increases from P_{quota} to P_e
- D. Output drops from Q_5 to Q_2

Questions 22 – 25 refer to the trade subsidy diagram below:




22. The cost of the subsidy to the government is

- A. \$1,000,000
- B. \$3,000,000
- C. \$5,000,000
- D. \$6,000,000

23. The volume of imports before and after the subsidy are
- A. 40,000kg and 20,000kg respectively
 - B. 20,000kg and 40,000kg respectively
 - C. 10,000kg and 20,000kg respectively
 - D. 20,000kg and 10,000kg respectively
24. Under free trade with the subsidy, domestic consumers spent a total amount of
- A. \$1,000,000
 - B. \$4,000,000
 - C. \$5,000,000
 - D. \$6,000,000
25. After the granting of the subsidy, how much did domestic consumers spend on imports?
- A. \$1,000,000
 - B. \$2,000,000
 - C. \$5,000,000
 - D. \$6,000,000

3.2 Exchange rates

Task 1 – Complete the missing words... 

The exchange rate measures the of a currency in terms of other currencies. For example, if the price of US dollar against the pound sterling is $\$1.5 = \pounds 1$, then a British tourist spending \$75 on a bottle of perfume in American would have spent the equivalent of \pounds If in the subsequent time period, the \$ against the \pounds to $\$1.65 = \pounds 1$, then tourists would pay \pounds for the same bottle of perfume in the USA. Similarly, if a Singaporean importer can purchase 5,000 renminbi (CNY) of goods from China for \$1,000 (SGD) then the rate of exchange is $1\text{CNY} = \text{SGD}$

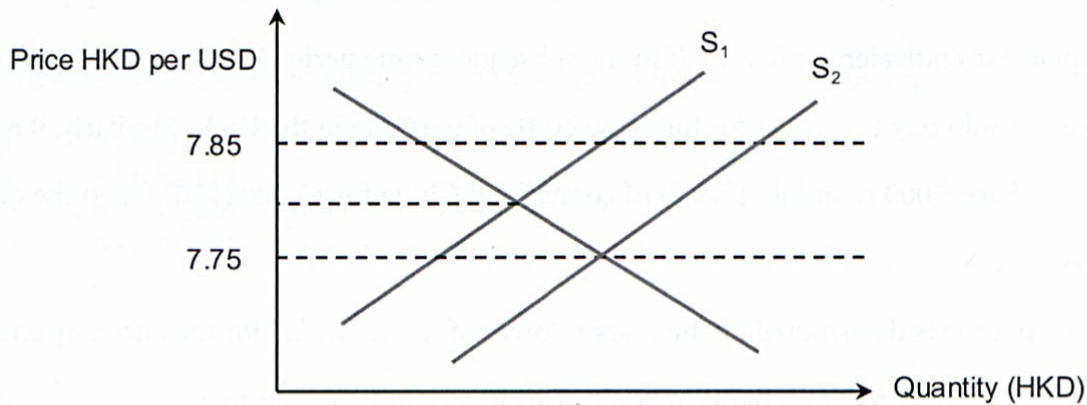
In general, the value of a currency is determined by the market forces of for the currency and the of the currency in the foreign exchange market. This is certainly the case in a exchange rate system. For example, overseas tourists will buy the domestic currency (by converting their overseas currency for the domestic one) so this increases the exchange rate, *ceteris paribus*. By contrast, a in interest rates might drive investors away as they sell the domestic currency in search of investments that yield better returns. In a freely floating exchange rate system, the currency is said to have if the exchange rate is rising. By contrast, the currency has if the exchange rate falls against other currencies.

In general, the demand for imports should fall if imports become more expensive. However, some imports are price because they are essential for production (such as oil and other raw materials and components) and cannot be made in the domestic economy. Hence, domestic firms might spend on these imports when the exchange rate falls in value. For example, if the Brazilian real (BRL) falls against the Canadian dollar (CAD) from 1.65:1 to 1.815:1, then Brazilian firms buying Canadian oil at a price of CAD80 per unit used to pay BRL132 but now have to pay the higher price of BRL per unit. This means Brazilian firms may need to reduce their price by% to remain competitive, despite their higher costs of production.

Under a exchange rate system, the government (perhaps via the Bank) directly intervenes in the foreign exchange market by buying and/or selling foreign exchange in order to maintain the exchange rate at a predetermined rate. For example, the Hong Kong dollar is pegged (fixed) against the US dollar at a rate of 7.8:1.

If the exchange rate is declining against the pegged currency, the government can raise the value by

demand, ceteris paribus, i.e. by purchasing more of its own currency on the exchange market. If the exchange rate is rising beyond the fixed rate, the government can its domestic currency on the foreign exchange market, thereby increasing its supply and reducing its price, ceteris paribus. In a fixed exchange rate system, the domestic currency is said to have been if the exchange rate is rising. By contrast, the currency has been in the exchange rate value against other currencies falls.



In the above diagram, the exchange rate has fallen from 7.8 to 7.75, perhaps due to speculators the HKD. To prevent the currency from falling below 7.75, the Hong Kong Monetary Authority (HKMA) intervenes by buying enough Hong Kong dollars to maintain the exchange rate. By contrast, the HKMA would sell if the exchange rate approached 7.85.

Task 2 – True or False? 👍 🙋

	True / False
a. Strong demand for a country's exports tends to put upward pressure on the exchange rate	
b. If the domestic currency appreciates in value against other currencies, exports will tend to become more expensive.	
c. If speculators expect the domestic currency to fall, there will be an increased supply of the currency in the foreign exchange market.	
d. If the exchange rate between Australian dollars (AUD) and Hong Kong dollars (HKD) changes from 1:7 to 1:8, then the HKD is said to have appreciated.	
e. Under a system of managed exchange rates, the government intervenes in the foreign exchange market to influence the demand and supply of the currency.	
f. The spot market refers to the area of the foreign exchange market where traders buy and sell currencies for immediate use.	
g. The international competitiveness of a country tends to increase with its currency being revalued.	
h. The domestic currency depreciates in value if there is inflation in the economy.	

i.	The external value of a currency is measured by the exchange rate, i.e. the price of one currency in terms of another currency.	:
j.	An advantage of a strong currency is that it becomes easier to resolve a trade deficit on the balance of payments.	

Task 3 – Explain...

a. Two disadvantages of fixed exchange rate systems.

b. Two disadvantages of a strong domestic currency.

c. One method used by the government (or Central Bank) to directly intervene in the foreign exchange market.

d. Why time lags need to be considered when analyzing the impact of changes in exchange rates.

e. Two ways domestic businesses can cope with a higher exchange rate.

Task 4 – Diagrams

The value of a currency will change if either the demand or supply curve (for the currency) changes. With the aid of supply and demand diagrams, illustrate the effects of the following from the perspective of the USA:

a. The USA increases its imports from China

b. American exports to Japan increase

c. The Federal Reserve (central bank) raises interest rates

d. Speculators feel that the US\$ will rise in value against other currencies.

Task 5 – Multiple Choice

1. Under which exchange rate system do the market forces of demand and supply determine the value of a currency?
 - A. Managed float
 - B. Freely float
 - C. Fixed
 - D. Adjustable peg

2. Which of the following is not a determinant of demand for the Malaysian ringgit?
 - A. Increased tourism in Malaysia
 - B. Increased demand for Malaysian exports
 - C. Increased interest rates in Malaysia
 - D. Increased desire to save in overseas banks

3. What might cause the Vietnamese dong to depreciate in value?
 - A. The State Bank of Vietnam raises interest rates
 - B. Slower economic growth in Vietnam
 - C. Speculators buying the dong
 - D. Vietnam's inflation rate falls relative to its trading partners

4. If the value of the Swiss franc is strong compared to other currencies, ceteris paribus, the
 - A. Price of Swiss exports will fall
 - B. Price of Swiss imports will fall
 - C. Price of Swiss products in Switzerland will fall
 - D. Price of Swiss products in Switzerland will rise

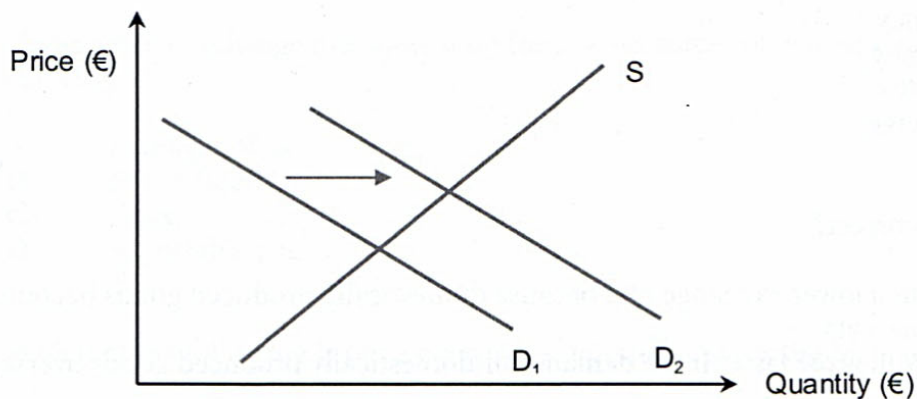
5. Which of the factors below increases the supply of pound sterling in the foreign exchange market?
 - A. An increase in the demand for UK exports
 - B. A fall in the demand for UK exports
 - C. An increase in the demand for UK imports
 - D. A fall in the demand for UK imports

6. In a freely floating foreign exchange system, an exchange rate that is above the equilibrium level causes
 - A. Excess demand with a subsequent fall in the exchange rate
 - B. Excess supply with a subsequent fall in the exchange rate
 - C. Excess demand with a subsequent rise in the exchange rate
 - D. Excess supply with a subsequent rise in the exchange rate

7. An increase in the value of the domestic currency is likely to raise spending on imports if
 - A. The price elasticity of demand for imports is price elastic
 - B. The price elasticity of demand for imports is price inelastic
 - C. The price elasticity of demand for exports is price elastic
 - D. The price elasticity of demand for exports is price inelastic

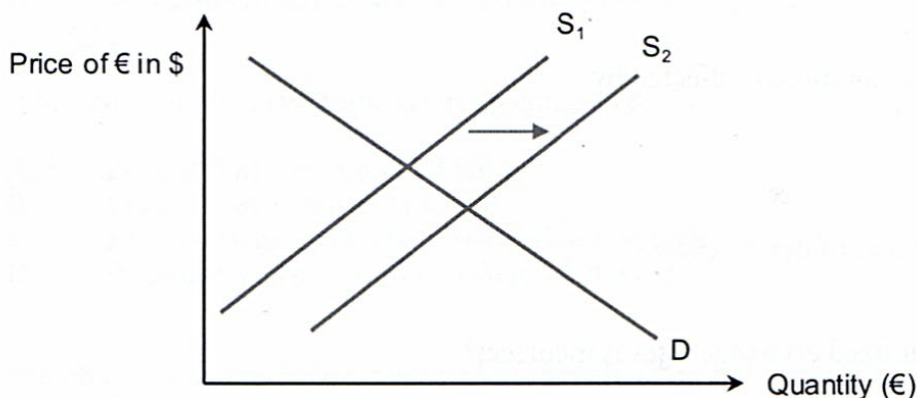
8. In a fixed exchange rate system, the government might prevent the exchange rate from rising by
- A. Selling its own currency
 - B. Buying its own currency
 - C. Increasing interest rates
 - D. Buying foreign exchange
9. Which statement below is incorrect?
- A. Exporters benefit from a lower exchange rate because domestically produced goods become cheaper in overseas markets
 - B. Demand for exports will grow faster if the demand for domestically produced goods overseas is price elastic
 - C. A fall in the exchange rate could help to reduce the country's trade deficit in goods and services
 - D. An increase in domestic interest rates reduces aggregate demand and therefore the exchange rate tends to also fall
10. Which of the following factors is most likely to cause an appreciation of the domestic currency?
- A. An increase in domestic interest rates
 - B. A decrease in domestic interest rates
 - C. An increase in the rate of economic growth
 - D. A decline in the balance of payments deficit
11. Exchange rate fluctuations are not directly affected by
- A. Interest rates
 - B. Time lags
 - C. Domestic inflation
 - D. Business and consumer confidence levels
12. Which statement below about fixed exchange rates is incorrect?
- A. The exchange rate against other currencies remains the same over time
 - B. Government intervention in the foreign exchange market takes place
 - C. Monetary policy can be used to keep the exchange rate constant
 - D. A depreciation of the exchange rate can be used to correct a trade deficit
13. If the Mexican peso goes from 11.7 pesos per dollar to 13.5 pesos per dollar, then
- A. The peso has appreciated by over 15% against the dollar
 - B. The peso has depreciated by over 15% against the dollar
 - C. The dollar has appreciated by over 18% against the peso
 - D. The dollar has depreciated by 15.38% against the peso
14. Suppose Bristol Cars, a specialist car maker, sells its cars at an average price of £120,000 to customers in America. If the exchange rate moves from £1 = \$1.6 to £1 = \$1.8, ceteris paribus the change in price to American customers would be:
- A. An extra \$8,333 per car
 - B. A reduction of \$8,333 per car
 - C. An extra \$24,000 per car
 - D. A reduction of \$24,000 per car

15. What could have caused the change in exchange rates in the diagram below?



- A. An increase in US demand for European exports
- B. The Federal Reserve raises US interest rates
- C. The European Central Bank reduces interest rates
- D. The European Union buys gold using its currency reserves

16. What could have caused the change in exchange rates in the diagram below?



- A. An increase in US demand for European exports
- B. An fall in European demand for US exports
- C. The Federal Reserve raises US interest rates
- D. The European Union buys gold using its currency reserves

17. In a fixed exchange rate system, what can the domestic central bank do to prevent the exchange rate falling below its desired minimum level?

- A. Sell foreign exchange reserves to increase demand for the domestic currency
- B. Buy gold and other precious metals as these tend to be more stable as a medium of exchange
- C. Reduce interest rates to encourage the sale of exports
- D. Embark on a programme of voluntary export restraints with its trading partners

18. Ceteris paribus, a currency depreciation helps to improve the balance of payments if

- A. The price elasticity of demand for exports is greater than one
- B. The price elasticity of demand for imports is greater than one
- C. The price elasticity of demand for exports and imports are greater than one
- D. The price elasticity of demand for exports and imports are less than one

19. An advantage of floating exchange rate systems is that
- A. It promotes exchange rate stability and hence international trade
 - B. Currency depreciation can help to adjust a balance of payments disequilibrium
 - C. Exchange rate certainty helps to boost consumer and producer confidence levels
 - D. Less prone to imported inflation due to a currency depreciation
20. Which of the following is most likely to prevent the Chinese yuan from appreciating against the US dollar?
- A. The People's Bank of China increases interest rates
 - B. The People's Bank of China buys foreign currency on the foreign exchange market
 - C. China maintains economic growth of over 9% per annum
 - D. The Federal Reserve reduces interest rates in the USA

Chapter 38

3.3 Balance of Payments

Task 1 – Complete the missing words...

The balance of payments is a record of a country's inflows and outflows of from economic activity during a given period (usually months). It consists of three accounts: the current account, the capital account and the financial account.

The account records all money flows to and from a country, mainly due to the import and export of goods and services. Other transactions recorded in this account include the transfer of income (profits, interest and dividends earned overseas) and *net transfers* (such as development aid and foreign workers sending money home). A current account occurs when import expenditure is greater than exports earnings. By contrast, if the country earns more from its exports than it spends on imports then a surplus exists. This usually means there is a relatively high demand for the country's

The account records transfers of money in and out of a country during a given time period. This includes changes in currency flows and bank deposits. Investment income earned or paid out (such as to foreign shareholders) is recorded in the capital account.

The account records short term capital flows (such as money used for speculation in the financial markets) and long term capital flows (such as foreign direct investment). This account records the buying and selling of stocks, shares and bonds, collectively known as investment.

Factors that affect the balance of payments include:

- Income – generally, as national income increases the demand for also rises (as consumers find that foreign products are more accessible) thereby creating a current account deficit, *ceteris paribus*.
- Relative prices – if domestic prices rise relative to foreign prices (perhaps due to inflation), imports will become relatively whilst exports become more Hence, the country is likely to experience a current account deficit.
- Relative interest rates – if domestic interest rates relative to those offered in other countries, short term capital is attracted into the country. Hence, the capital account is likely to move toward a surplus.

- Relative investment opportunities – foreign capital will be attracted into a country if it offers a relatively return on investment. Hence, the capital account is likely to move into a surplus, ceteris paribus. *

There are two generic ways to resolve a balance of payments deficit: expenditure-reducing and expenditure-switching policies. Expenditure-reducing methods are policies that limit domestic spending, such as higher rates of income tax, higher interest rates or lowering the government budget deficit. This, in theory, means that less people are able to buy imported products due to their lower disposable income. Expenditure-switching policies are those that encourage the purchase of domestically produced products rather than imports, such as by export promotion and devaluating the exchange rate.

Alternatively, governments can use expenditure-reducing policies (such as raising interest rates and/or tax rates to lower disposable income, thereby lowering the demand for imports) or expenditure-switching policies (such as investment in training and development to improve the skills and productivity of the workforce, thereby enhancing the quality of exports).

Higher Level

Under a fixed exchange rate system, governments might use a devaluation of the currency to resolve a balance of payments deficit. However, the Mundell-Fleming theory suggests that this might initially worsen the country's balance of payments before improvements are seen, due to the time lags (caused by limited access to information, ongoing contracts and existing habits). The effectiveness of this policy, according to the Marshall-Lerner condition, depends on the price elasticity of demand for both exports and imports. In theory, devaluation of the currency will only resolve a balance of payments deficit if the sum of the PED for imports and exports is greater than one, i.e. price elastic.

Task 2 – True or False?

	True / False
a. The balance of payments is a record of a country's sources and uses of foreign exchange.	
b. Export earnings represent a credit item on the current account.	
c. A budget deficit occurs when a country's exports are less than its imports.	
d. The balance of payments is the sum of all transactions that take place between a country's households and the residents of all foreign trading nations.	
e. The balance of invisibles is not shown in the balance of payments current account.	
f. The balance of trade records all transactions involving the export and import of goods only.	

g.	A persistent deficit on the balance of payments would deplete the country's foreign exchange reserves	
h.	Japanese tourists visiting Denmark is recorded as a debit on Japan's balance of payments.	
i.	Contractionary fiscal policy and tight monetary policy are examples of expenditure switching policies.	
j.	The 'J curve' theory suggests that the balance of trade gets worse, following a currency depreciation, before it gets better. <i>(HL only)</i>	

Task 3 – Explain...

a. Why import expenditure represents a debit item on the balance of payments.

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b. Why a balance of payments surplus is not necessarily desirable.

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c. How a major depreciation of the currency might help a country to correct its balance of payments deficit.

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d. Two reasons why developing economies tend to have a negative capital account deficit.

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e. The effect on Japan's capital account if Japanese citizens purchase US government bonds.

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f. How the 'J' curve is affected by time lags and the price elasticity of demand for exports and imports. *(HL Only)*

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g. Two reasons why a balance of payments deficit is a concern for the economy.

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Task 4 – Categories of the balance of payments

Use ticks (✓) to identify the following transactions as either exports (of goods or services), imports (of goods or services), investment income or current transfer on the balance of payments. Consider each transaction from the perspective of the American economy. The first one has been done for you:

Transaction	Export (good)	Export (service)	Import (good)	Import (service)	Investment income	Current transfer
AIG sells insurance in China						
American tourists visit Europe						
Brazil buys American coal						
China buys US treasury bonds						
Dividends paid to foreign owners						
Earnings of US expatriates						
Foreign tourists visit the USA						
Honda sells 32,000 cars in the USA						
Profits from US multinationals						
Purchase of Canadian beef						
Purchase of steel from India						
Sale of oil to Mexico						
Subsidies to US farmers						
US aid to flood victims overseas						

Task 5 – Multiple Choice

- A decline in which of the following factors is most likely to reduce a balance of payments deficit?
 - Interest rates
 - Tax rates
 - The exchange rate
 - Unemployment rate
- The balance of payments does not record
 - Merchandise exports and imports
 - Tourism earnings
 - Purchases of financial assets abroad
 - Foreign aid from the World Bank
- The balance of payments does not comprise the
 - Current account
 - Capital account
 - Official reserves account
 - Terms of trade

4. The visible trade balance shows the
- Sum of export earnings minus the sum of import expenditure
 - Value of exported goods minus the value of imported goods
 - Net sum of the trade in services
 - Money flow of investment incomes and foreign exchange transfers
5. Which of the following is not included in the balance of invisibles?
- Insurance
 - Tourism
 - Management consultancy
 - Engineering
6. Identify the item below which is not recorded in the capital account
- The purchase of real estate (land)
 - Bank deposits
 - Development aid
 - Foreign currency

Questions 7 – 8 refer to the information below:

Trade in goods	=	- \$22bn
Trade in services	=	+ \$15.3bn
Income	=	+ 8.2bn
Transfers	=	- \$4bn

7. The value of the current balance on the balance of payments is
- \$2.5bn
 - \$6.7bn
 - \$10.7bn
 - + \$1.5bn
8. The value of the current account on the balance of payments is
- \$2.5bn
 - \$6.7bn
 - \$10.7bn
 - + \$1.5bn
9. In theory, under which exchange rate system would a balance of payments disequilibrium automatically be restored without the need for government intervention?
- Dirty float
 - Freely floating
 - Fixed
 - Adjustable peg
10. If a German company buys US government bonds, this is recorded as
- A credit on the US balance of trade
 - A credit on the US capital account
 - A debit on Germany's balance of invisibles
 - A debit on Germany's trade balance

11. Which of the following is not a consequence of a current account deficit?
- A. Currency depreciation
 - B. Unemployment
 - C. Higher interest rates
 - D. Economic instability
12. Which of the following is a consequence of a current account surplus?
- A. Increased ownership of assets abroad
 - B. A decline in foreign exchange reserves
 - C. A deficit on the capital account
 - D. The threat of protectionism overseas diminishes
13. Which of the following is used to calculate the marginal propensity to import?
- A. Percentage change in import expenditure divided by percentage change in income
 - B. Change in import expenditure divided by change in income
 - C. Price of exports divided by price of imports
 - D. Value of imports divided by value of exports
14. Which of the following is not an expenditure-reducing policy designed to reduce a balance of payments deficit?
- A. Higher tax rates
 - B. Higher interest rates
 - C. Subsidies for domestic producers
 - D. Currency controls
15. Which of the following can help to reduce a country's balance of payments deficit on the current account?
- A. Higher interest rates
 - B. Reduced income tax
 - C. Increased labour productivity
 - D. Expansionary fiscal policies
16. Which of the following measures does not help to fix a large current account deficit?
- A. Encourage domestic consumers to purchase locally produced goods
 - B. Devaluation of the currency
 - C. Expenditure-reduction policies
 - D. Lower rates of income tax
17. Government policies intended to encourage consumers to change their spending away from imports towards products made by domestic firms are known as:
- A. Expenditure-switching policies
 - B. Expenditure-reducing policies
 - C. Expansionary fiscal policies
 - D. Expansionary monetary policies

18. If Japan's Sony (consumer electronics) and Toyota (carmaker) purchase production plants in Thailand, this will be recorded in Thailand's balance of payments as:
- A. A credit in its current account
 - B. A credit in the capital and financial account
 - C. A debit in its trading account
 - D. A debit on its current account
19. The J-curve effect of a currency depreciation or devaluation means that (*HL only*)
- A. GDP will fall in the short run but rise in the long run
 - B. Export earnings rise and import expenditure falls
 - C. The balance of trade worsens before it improves
 - D. The sum of the price elasticities of demand for imports and exports is greater than 1.0
20. Investment income includes
- A. Interest, profits and dividends from assets owned and located overseas
 - B. Rent, wages, interest and profit
 - C. Foreign direct investment from multinational corporations
 - D. Capital expenditure from domestic businesses

Chapter 39

Economic integration

Task 1 – Key terms...

Identify the key terms from the clues given. *Hint:* the answers are in alphabetical order!

Key Term	Definition
	Legally binding trade contract between two countries, such as a closer economic partnership agreement (CEPA).
	Refers to a customs union that allows the free movement of factors inputs (land, labour, capital and enterprise) between member countries.
	A group of countries that engages in free trade and sets common external tariff rates for non-member countries
	The process of countries becoming more interdependent and unified.
	Abbreviated as FTA, this refers to members agreeing to trade freely with each other, but have separate trade barriers with non-member countries.
	Refers to a common market that uses a common currency, such as the euro, that is overseen by a common central bank.
	Legally binding trade treaty between more than two countries, such as those formed by trading blocs.
	Trade deals that give special or favourable terms and conditions, such as reduced taxes, to certain countries.
	This occurs when trade shifts from higher-cost producers outside the trading bloc to lower-cost producers within the bloc due to the removal of trade barriers <i>(HL Only)</i>
	This occurs when trade shifts from lower-cost producers outside the trading bloc to higher cost producers within the trading bloc due to trade agreements. <i>(HL Only)</i>
	This refers to a group of countries that agree to economic integration and freer international trade with each other by removing trade barriers.

Task 2 – True or False?

	True / False
a. A regional trading bloc allows member countries from all over the world to unite to remove barriers to international trade.	
b. Trade protectionism, rather than economic integration, is detrimental to consumers because the price of the imported products rises.	
c. A customs union exists when countries agree to reduce and remove tariff and non-tariff barriers to the free flow of products between its member states.	

d.	A free trade area is more integrated than a common market.	
e.	Economic integration will intensify competition for producers within a trading bloc.	
f.	A trading bloc will impose barriers to international trade, such as the imposition of tariffs to increase the price of exports, for non-member states.	
g.	The greatest degree of economic integration occurs in a free trade area.	
h.	A monetary union exists when member states either permanently fix their exchange rates or use a single currency.	
i.	Formation of regional trading blocs is likely to create both trade creation and trade diversion.	
j.	Trade agreements improve the welfare of society if they lead to trade creation. <i>(HL Only)</i>	
k.	Economic integration benefits its member countries when trade diversion exceeds trade creation. <i>(HL Only)</i>	

Task 3 – Explain... 

a. The difference between multilateral trade agreements and bilateral trade agreements.

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b. Why joining a regional trading bloc might lead to more unemployment in the short run.

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c. Two benefits for a multinational corporation that operates within a regional trading bloc.

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d. Two features of a monetary union.

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Task 4 – Multiple Choice

1. Members of a free trade area agree to remove all the following except

- A. Tariffs
- B. Quotas
- C. Taxes
- D. Export restraints

2. An advantage of not joining a trading bloc is the opportunity to
- A. Exploit new market opportunities
 - B. Lower costs by operating in overseas markets
 - C. Enjoy economic independence
 - D. Spread risks
3. A free trade requires state members to remove trade with each other
- A. Area, Barriers
 - B. Agreement, Barriers
 - C. Area, Conflict
 - D. Agreement, Conflict
4. Member countries of a trade agreement that agree to establishing a common external tariff to non-member states are collectively known as a
- A. Customs union
 - B. Economic trading bloc
 - C. Partnership Agreement
 - D. Free trade area
5. A common market refers to a regional trading bloc where there is
- A. Free trade and free movement of labour and capital between member countries
 - B. Free trade between member countries
 - C. Free movement of labour and capital between member countries
 - D. Monetary union between all member states
6. Which of the following is an economic benefit of being a member of a regional trading bloc?
- A. It raises trade barriers to non-member states
 - B. An increased customer base, meaning the potential to exploit economies of scale
 - C. Changes in economic conditions in one member country, such as inflation or growth, will directly affect the economic performance of member states
 - D. It eliminates exchange rate risks for member states
7. The free movement of goods, services, capital and labour between member countries means that they are in a
- A. Free trade area
 - B. Customs union
 - C. Common market
 - D. Monetary union
8. Which statement best describes a free trade area?
- A. An area with preferential trading area
 - B. No tariff charges on selected goods for members, but each country keeps its own tariffs towards non-members
 - C. The free movement of goods, services, capital and labour between member countries
 - D. An area with a fixed exchange rate system or a single currency

9. In a free trade area
- Tariffs are lowered rather than removed
 - Tariffs are removed rather than lowered
 - There is convergence of fiscal and monetary policies
 - There is centralized economic and political decision making
10. Which of the following has yet to be achieved in a monetary union?
- Removal of tariffs
 - Harmonization of taxes
 - Convergence of fiscal and monetary policies
 - Imposition of a common external tariff
11. Which of the following is not a feature of a monetary union?
- There is convergence of interest rates in member countries
 - There is flexibility in exercising monetary policy
 - Monetary policy is overseen by a central bank for all members
 - Exchange rates are permanently fixed between members or they adopt a single currency
12. Which of the following is not a drawback of a common market?
- Loss of domestic economic sovereignty
 - Harmonization of stricter environmental legislation and labour laws
 - Creation of larger oligopolies and monopolies
 - Increased labour mobility
13. Which of the following is not necessarily a feature of trading blocs?
- Firms can benefit from access to a wider customer base without facing trade barriers
 - Allow all member states to benefit from economies of scale
 - The promotion of freer international trade and specialization
 - The establishment of a common currency across all members of the trading bloc
14. Preferential trade agreements
- Give special (favoured) access to certain goods from certain countries
 - Impose common external tariffs on non-member states
 - Strive to achieve monetary union
 - Establish harmonization of tax laws
15. Which statement below is incorrect?
- Foreign direct investment is a feature of economic integration
 - Globalization is a feature of economic integration
 - There is an incentive to trade more within a free trade area
 - Economic welfare amongst member countries can diminish as prices of goods and services rise with the formation of a free trade area

16. Trading blocs provide opportunities for firms to benefit from (*HL Only*)
- A. Trade diversion
 - B. Economies of scale
 - C. Monetary union
 - D. Freedom from exchange rate fluctuations
17. Which of the following is a disadvantage of joining a regional trading bloc? (*HL Only*)
- A. Removal of barriers to trade
 - B. Promotes international trade of goods and services
 - C. Trade diversion
 - D. Trade creation
18. Which of the following is not a drawback of joining a regional trading bloc? (*HL Only*)
- A. Unemployment could be created as domestic firms face increased competition
 - B. Trade diversion is created
 - C. Trade creation takes place
 - D. Policies taken by the RTB might not suit all member states
19. All the statements below are valid arguments for limiting economic integration, except (*HL Only*)
- A. Opportunities for specialization
 - B. The protection of infant industries from international rivals
 - C. Political and strategic reasons
 - D. Protect domestic employment
20. The USA used to produce its own textiles at a higher cost than Mexico. Having joined the NAFTA, the USA now imports textiles from Mexico. This is an example of (*HL Only*)
- A. Trade creation
 - B. Trade diversion
 - C. Specialization
 - D. Globalization

Chapter 40

3.5 Terms of trade (HL Only)

Task 1 – Complete the missing words

The terms of trade (TOT) refers to the ratio of prices to prices, per time period, i.e. P_x divided by P_m , expressed as an index number. The terms of trade are measured using a weighted index because there is a vast amount of goods and services traded. This differs from the rate which measures the of exports in terms of foreign currency. A fall in demand for exports would the demand for the home currency. Ceteris paribus, this the price of exports relative to the price of imports, thereby the terms of trade. This is because each unit of exports buys fewer units of imports. However, depending on the elasticity of demand for exports and imports, lower export prices can cause an in export revenues thereby improving the account on the balance of payments. Note that an 'improvement' in the terms of trade (i.e. each unit of exports is worth than each unit of imports) is not necessarily a 'good' thing as prices can lead to lower demand and hence have negative effects on the international trade.

To calculate the terms of trade, numbers are used to convert the price of a commodity, such as silver or coffee. This simplifies calculations and allows for easier comparisons as prices are no longer expressed in different, such as US dollars for silver and Thai baht for rice.

Year	Price of silver (\$ per unit)	Index num- ber (silver)	Price of rice (per unit)	Index num- ber (rice)	TOT (USA)	TOT (Thailand)
2010	1,540	106.2	17,095	96.0	110.6	90.4
2011	1,450	100.0	17,805	100.0	100.0	100.0
2012	1,650	113.8	16,060	90.2	126.2	79.3

So, if 2011 is used as the base year (with an index number of 100), the index number for the price of rice in 2010 is calculated as / * 100 = 96.0. Similarly, the index for silver in 2012 is calculated as 1,650 / * 100 = Finally, to work out the terms of trade for the USA (exporting silver and importing rice), divide the index price of the export by the index price of imports, e.g. the terms of trade equals / * 100 = 126.2 in 2012. Likewise, the terms of trade for Thailand (exporting rice and importing

silver) in 2012 is calculated as / * 100 = 79.3. So, in this example, the terms of trade have for the US economy.

There are two main causes of a change in the terms of trade in the short run. These are changes in the market of goods and services, and changes in the rate. For example, demand-pull inflation will cause domestic prices to rise, thereby the country's terms of trade (although inflation itself is not necessary good for the economy). By contrast, depreciation of the exchange rate of the home currency will the terms of trade.

In the long run, two fundamental factors can change the terms of trade for a country: long-term changes in demand, affecting the of (YED) and long-term changes in supply, such as technological changes and productivity gains which increase the capacity of the economy. Typically, higher incomes lead to an increase in the demand for goods and services in the secondary and tertiary sectors which are relatively income This therefore improves the terms of trade for countries that produce these goods and services.

Task 2 – True or False? 👍 👎

	True / False
a. The terms of trade can improve despite a fall in the price of exports.	
b. Less economically developed countries tend to have unfavourable terms of trade.	
c. All things being equal, an export subsidy worsens the terms of trade.	
d. The terms of trade is the amount of exports needed to purchase a given amount of imports, per time period.	
e. The terms of trade improves as export prices fall in relation to import prices.	
f. All things being equal, an import tariff worsens the terms of trade.	
g. Ceteris paribus, the more imports that a country can obtain for each unit of exports, the better off it will be.	
h. If import prices rise relative to export prices then the terms of trade is said to worsen.	
i. Whether a change in the terms of trade improves or worsens the balance of payments depends on the price elasticity of demand for both imports and exports.	
j. Changes in the terms of trade in the long run can cause a global redistribution of income and wealth.	
k. An improvement in the terms of trade is beneficial to the domestic economy.	

Task 3 – Multiple Choice

1. The terms of trade are
 - A. An average of export prices divided by an average of import prices, expressed as an index number
 - B. An average of export prices divided by an average of import prices, expressed as a percentage
 - C. An average of import prices divided by an average of export prices, expressed as an index number
 - D. An average of import prices divided by an average of export prices, expressed as a percentage

2. When world prices rise relative to domestic prices, what will tend to happen?
 - A. Exports increase
 - B. Imports increase
 - C. Exports decrease
 - D. Imports stay the same

3. If prices rise relative to prices then the terms of trade is said to
 - A. Export, import, improve
 - B. Import, export, improve
 - C. Export, import, worsen
 - D. Import, export, increase

4. Which statement about the terms of trade is incorrect?
 - A. It only reveals price movements and tell us nothing about how the volume of trade changes as a result of the price changes
 - B. Volume changes will depend on the price elasticity of demand for both exports and imports
 - C. Fluctuations in the exchange rate are a short term cause of changes in the terms of trade
 - D. The terms of trade may change in the long term due to technological developments

5. Which of the following is a long term cause of a change in the terms of trade?
 - A. Changes in the supply of key inputs to production such as oil
 - B. Changes in relative rates of inflation
 - C. Changes in relative exchange rates
 - D. Changes in technological developments within the country

6. Ceteris paribus, if the supply of rice increases from the world's top two rice suppliers India and Thailand
 - A. The terms of trade in India and Thailand will both improve
 - B. The terms of trade in India and Thailand will both worsen
 - C. The terms of trade in Thailand will worsen whilst it will improve in India
 - D. The terms of trade in India will worsen whilst it will improve in Thailand

7. An increase in the aggregate supply of an economy will tend to
 - A. Have a deflationary effect, causing export prices to fall and hence worsening the terms of trade
 - B. Have an inflationary effect, causing export prices to rise and hence improving the terms of trade
 - C. Have a deflationary effect, causing export prices to fall and hence improving the terms of trade
 - D. Have an inflationary effect, causing export prices to rise and hence worsening the terms of trade

8. The terms of trade is calculated using an index of average
- Export prices divided by the index of average import prices
 - Export prices divided by the index of average import prices * 100
 - Import prices divided by the index of average export prices * 100
 - Import prices divided by the index of average export prices
9. Which statement about primary sector products in less economically developed countries is correct?
- The elasticity of demand is highly price elastic
 - The elasticity of demand is highly price inelastic
 - The income elasticity of demand is highly elastic
 - The elasticity of supply is highly price elastic
10. Ceteris paribus, what would happen if world prices fall relative to domestic prices?
- Imports increase in volume
 - Exports increase in volume
 - Imports decrease in volume
 - Imports increase by value
11. In which of the following cases would the terms of trade for a country not improve?
- Increased demand for the country's exports
 - Increased supply of export goods which have a low price inelasticity of demand
 - A revaluation of the exchange rate against its main trading partners
 - An increase in foreign direct investment (FDI) in the country
12. The scarcity of oil coupled with its low price elasticity of demand mean that
- The terms of trade will improve in the short-term for oil-rich countries such as Kuwait
 - The terms of trade will worsen in the short-term for oil-rich countries such as Kuwait
 - The terms of trade for oil-rich countries will worsen in the long term
 - The terms of trade for oil-rich countries will improve in the long term
13. Benefits of an improvement in a country's terms of trade do not include
- The country being able to consume more imports, thereby experiencing a general increase in standards of living
 - Debt servicing is less of a burden as the country can repay its loans easier
 - Exports revenues will increase if exports are price inelastic in demand, thereby improving the balance of payments current account
 - Inflation in the domestic economy, which causes the average price of exports to rise relative to the average price of imports
14. Which statement below does not highlight a disadvantage of an improvement in the terms of trade?
- If demand for the country's exports are price elastic, export earnings will fall thereby worsening the balance of trade
 - If demand for the country's imports are price elastic, spending on imports will rise
 - There is an unfavourable impact on the balance of payments current account
 - The improvement in the terms of trade could lower both national income and employment

15. Benefits of a deterioration in a country's terms of trade do not include
- A. If the price elasticity of demand for the country's exports is price elastic, there will be an improvement in the current account on the balance of payments
 - B. There can be higher demand for exports as prices are relatively lower
 - C. A deterioration in the terms of trade can lead to higher aggregate demand and improved job opportunities
 - D. Foreign debts are likely to fall for countries dependent on foreign imports
16. Drawbacks of a deterioration in a country's terms of trade do not include
- A. If demand for imports is price inelastic, there will be a negative effect on the current account
 - B. If the demand for exports is price inelastic, there will be a negative effect on the current account
 - C. Higher priced foreign goods can reduce total consumption in the economy
 - D. Higher priced imports can generate expenditure switching in the domestic economy
17. In a simplistic two-product model, if India produces rice at \$30 per unit and Brazil produces coffee at \$80 per unit, then China's terms of trade with Brazil would be
- A. 0.375
 - B. 2.667
 - C. 26.67
 - D. 37.5
18. If the terms of trade index for a country changes from 116 to 120, then
- A. The terms of trade have improved by 4%
 - B. The terms of trade have improved by less than 4%
 - C. The terms of trade have worsened by 4%
 - D. The terms of trade have worsened by less than 4%
19. An improvement in the terms of trade can improve the current account on the balance of payments if
- A. Demand for exports is relatively price inelastic
 - B. Demand for exports is relatively price elastic
 - C. Demand for exports is relatively income elastic
 - D. Supply of exports is relatively price inelastic
20. Ceteris paribus, debt servicing (repayment plus interest) can become an issue if
- A. More exports are needed to pay off the loans following a deterioration in the terms of trade
 - B. Less economically developed countries have a range of commodities for export earnings
 - C. There is an increase in the exchange rate
 - D. Producers limit the supply of primary sector output
21. A deterioration in the terms of trade does not cause
- A. Higher costs of debt servicing
 - B. A balance of payments current account deficit
 - C. More problems for the repayment of debt
 - D. Higher import consumption

22. An unfavourable movement in the terms of trade causes
- Higher costs of debt servicing because a larger quantity of exports are needed to repay foreign debt
 - A current account surplus, thereby increasing the national debt
 - Higher commodity prices which creates an incentive for producers to increase their supply
 - An increase in the demand for imports needed for domestic production

Questions 23 – 25 refer to the information below for a particular country:

Year	Price of sugar exports (\$ per unit)	Price of cotton imports (\$ per unit)
2010	486.8	92.0
2011	520.8	160.6
2012	606.5	82.2

23. The price index of sugar exports in 2012 is
- 93.5
 - 100.0
 - 116.5
 - 606.5
24. The value of the terms of trade in 2010 is
- 93.5
 - 100.0
 - 163.2
 - 227.5
25. It can be concluded from the table above that between 2010 and 2012 the terms of trade in the country have
- Improved from 529.1 to 737.8
 - Improved from 163.2 to 227.5
 - Improved from 93.5 to 116.5
 - Deteriorated from 57.3 to 51.2

Chapter 41

Economic development - the nature of development

Task 1 – Complete the missing words...

Economic growth can be defined as the increase in real (GDP) over time. Technically, this occurs when real GDP or (GNP) rises for two consecutive quarters. Growth is therefore a quantitative variable. Economic development not only encompasses economic growth, but also involves a reduction in: poverty, income inequality, gender inequality and unemployment. Hence, economic development also includes qualitative variables that affect the of life.

There is diversity among LEDCs. One of the main problems of comparing the GDP of LEDCs is that the figures are usually expressed in different currencies. Whilst using rates might allow better comparisons, these tend to fluctuate over time. Diversity also occurs between LEDCs in other areas such as:

- Resource endowment – different countries have different quantities and qualities of resources. For most LEDCs, national output and exports consist largely of materials and agricultural products.
- History (colonial or otherwise)
- Political systems and stability
- Population – whilst many LEDCs have populations (such as Bangladesh and Ethiopia), others do not (such as Mali and Burkina Faso). However, many LEDCs have very fast growing populations, such as in Uganda, Niger and Rwanda.
- The health system and the state of health technology – these will affect the general state of health in the country, including infant mortality, maternal mortality and life expectancy.
- Access to basic such as water (and how safe this might be) and electricity.
- Access to education and training opportunities – factor such as the percentage of children with access to primary, secondary and further education will affect a nation's development.
- Inequality in the of income and wealth – whilst there may be absolute poverty in LEDCs, a small minority will account for much of the income and wealth of the nation.

The Millennium Development Goals (MDGs) of the United Nations consists of eight international development goals. The target for all 193 UN member states is to achieve these MDGs by 2015. The anti-poverty MDGs are:

1. Eradicate extreme poverty
2. Achieve universal education to (at least) primary level
3. Promote gender equality and empower women
4. Reduce child mortality rates
5. Improve maternal health
6. Combat diseases such as HIV/AIDS and malaria
7. Ensure environmental sustainability, and
8. Develop a global partnership for development

Task 2 – True or False?

	True / False
a. Economic development is a wider concept than economic growth, because it includes qualitative aspects such as a reduction in poverty.	
b. Economic growth can occur with greater income inequality but economic development cannot.	
c. Economic development can occur if unemployment increases due to automation that increases productivity.	
d. Economic growth is usually a prerequisite to economic development.	
e. There is a direct (positive) correlation between economic growth and economic development.	
f. Economic growth always leads to some degree of economic development.	
g. If an economy achieves high rates of economic growth but fails to improve the standards of living for the majority of its people, there is no development.	
h. An increase in real per capita income means that there is an improvement in standards of living in the economy.	
i. If the population of a country expands at the same rate as its real output, then real GDP per capita will remain unchanged.	
j. Economists tend to prefer looking at GDP rather than GNP as a measure of growth and development in LEDCs.	

Task 3 – Explain...

- a. How economic development considers more than just an increase in real GDP per capita over time.
-
-

- b. Two situations in which economic growth does not lead to economic development.
-
-
-

- c. Two reasons why high population growth hinders economic development, *ceteris paribus*.
-

d. Some economic development is possible in the absence of economic growth.

e. The difference between cost of living and standard of living.

Task 4 – Multiple Choice

1. Which of the following is not generally considered as a characteristic of less economically developed countries (LEDCs)?
 - A. Low GDP per capita
 - B. Negative economic growth
 - C. Large informal sectors
 - D. High birth rates

2. Economic growth can best be defined as
 - A. An increase in real GDP per capita over time
 - B. An increase in real GNP per capita over two consecutive quarters
 - C. Increasing real GDP per capital with lower income inequalities
 - D. An increase in the wealth of an economy over time

3. An increase in which of the following factor would be considered as growth, rather than development
 - A. Poverty
 - B. Unemployment
 - C. Inequality
 - D. Per capita income

4. The process of improving the wellbeing of all people in the country through better living standards and greater self-esteem, dignity and respect is known as
 - A. Economic prosperity
 - B. Economic growth
 - C. Economic development
 - D. Social development

5. What occurs when there is an increase in the productive capacity of the economy, as measured by an increase in the country's real Gross Domestic Product over a period of time?
 - A. Economic development
 - B. Economic growth
 - C. Sustainable growth
 - D. Sustainable development

6. Which of the following statements best describes sustainable economic development?
- A. Development that meets the needs of the present generation without compromising the ability of future generations to meet their needs
 - B. The ethical approach to the natural environment in meeting the needs and wants of society
 - C. An increase in real GDP per capita over time without a fundamental change in the natural environment
 - D. Improving the quality of life while reducing overall pollution and waste, and reducing environmental burden
7. Which of the following is most likely to reduce the per capita income gap between LEDCs and MEDCs?
- A. Faster population growth
 - B. Increased consumption in the economy
 - C. Increased capital flight from the country
 - D. Rapid improvements in literacy and education
8. Which factor does not have a positive correlation with economic growth?
- A. Output per worker
 - B. Life expectancy
 - C. Primary sector employment
 - D. Literacy rates
9. Less economically developed countries tend to have
- A. Low rates of economic growth and relatively high rates of population growth
 - B. Low rates of population growth and low economic growth
 - C. Low rates of literacy and relatively low rates of population growth
 - D. High rates of population growth and higher rates of economic growth
10. Assume a LEDC has a real per capita income of \$1,000 whilst that for a MEDC is \$25,000. If both countries experience economic growth of 3.5%, the absolute real per capita income gap will
- A. Remain unchanged at \$24,000
 - B. Increase by \$840
 - C. Decrease by \$840
 - D. Increase by \$24,875
11. If the real GDP of an LEDC changes from \$400 billion to \$425 billion whilst its population increases from 168 million to 173 million in a given time period, then its real GDP per capita has
- A. Increased by about \$75
 - B. Decreased by about \$75
 - C. Increased by about 2%
 - D. Decreased by about 3%
12. If a country's real GDP grows by 10 percent each year, its real GDP will have doubled in approximately
- A. 5 – 6 years
 - B. 7 – 8 years
 - C. 10 years
 - D. 20 years

13. Which of the following is least likely to be considered as a variable influencing economic development?
- Income inequality
 - Trade negotiations
 - Political freedom
 - Access to education
14. Which of the following is not a key problem for low-income countries?
- Capital flight
 - Intergenerational poverty
 - High saving rates
 - Poor social infrastructure
15. Which of the following does not apply to the Millennium Development Goals (MDG)?
- Agreed development goals of the United Nations
 - Aim of eradicating extreme poverty
 - Strive for reduced child mortality rates
 - Goals are easily measurable for each member country
16. Which issue is least likely to be a consideration when measuring economic development?
- Tax systems
 - Social and welfare benefits
 - Life expectancy
 - National defense expenditure
17. Many LEDCs suffer from 'brain drain'. What does this mean?
- The best-educated workers emigrate from the LEDC to a MEDC
 - Workers are concentrated in agriculture rather than tertiary sector employment
 - Worker are concentrated in urban, rather than rural, areas
 - There is a lack of sufficient education as measured by adult literacy rates
18. Capital flight refers to
- The outflow of financial capital from a particular country
 - The outflow of physical capital from a particular country
 - The inflow of financial assets to a certain country
 - The inflow of human capital (skilled labour) from a certain country
19. Which of the following best describes the vicious cycle of poverty?
- Government spending is limited by the incentive to save, which affects the amount available for investment in the economy
 - Higher GDP per capita encourages consumption in the short run at the expense of capital accumulation, which causes national income to fall in the long run
 - Low per GDP per capita causes low levels of saving and investment, leading to low productivity and hence low incomes
 - Higher national income increases inflation, thereby raising interest rates and reducing investment

20. Important sources of economic growth and development in LEDCs do not include



- A. An increase in the amount of physical capital
- B. Development and use of technology
- C. Institutional changes
- D. High population growth

Economic development – Measuring development

Task 1 – Matching exercise

Match the key term with the correct explanation:

Key term	Definition
1. Composite indicators	a. A statistic measure of economic development using just one gauge (measure), such as literacy rates or longevity rates.
2. Education indicators	b. A composite indicator (of life expectancy, educational attainment and income) used as an alternative to GDP as a measure of development.
3. GDP per capita	c. This statistical method combines individual indicators (of economic development) into a single index.
4. GNI per capita	d. The adjustment of prices of the same basket of goods and services in different countries for a given sum of money.
5. Health indicators	e. A key dimension of the Human Development Index (HDI), these measure literacy rates, e.g. average years of schooling.
6. Human Development Index	f. GDP per person, including the net value of what a country earns from overseas investments.
7. Purchasing power parity	g. A key dimension of the HDI, these measure human longevity (life expectancy) as an indicator of the quality of life for all.
8. Single indicators	h. A single indicator of economic development, this calculates the national income of a country divided by its population.

Task 2 – True or False?  

	True / False
a. Income is a flow concept whereas wealth is a stock concept.	
b. Gross national income (GNI) includes net property incomes earned abroad by nationals of the country.	
c. Market exchange rates adjust independently to account for differences in the cost of living between different countries.	
d. Purchasing power parity values are stable (they do not change quickly) so the figures are likely to be accurate or misleading.	
e. Countries such as Sierra Leone, Liberia, Mozambique, Niger and Burkina Faso have a very low Human Development Index (HDI).	
f. In the Human Development Index, the dimension of “health” is measured by the indicator “life expectancy at birth”.	
g. Countries with a relatively higher GNI per capita have a high HDI.	
h. The GNI can be used in place of the HDI to measure economic development.	
i. Education and healthcare indicators are included in the HDI as these are signs of successful government policies in providing access to vital merit goods.	

j.	Norway is likely to have a high HDI of around 0.943 whereas Ethiopia is likely to have a low HDI of around 0.363.	•
k.	The three dimensions of the HDI are assigned equal weights in the index.	
l.	Development occurs with the reduction of inequality and poverty, improving the HDI, but this does not mean that GNI necessarily increases.	

Task 3 – Multiple Choice

1. Which statement below best describes the concept of economic development?
 - A. Higher gross domestic product (GDP) along with a larger population
 - B. Sustainable increases in GDP per capita
 - C. An increase in the productive capacity of the economy
 - D. Increases in GDP over time, accompanied by changes in to people's wellbeing

2. Single indicators of economic development do not include
 - A. Real GDP per capita
 - B. Real GNI per capita
 - C. GDP per capita at purchasing power parity exchange rates
 - D. Human Development Index

3. The exchange rate that equates the price of a basket of identical traded goods and services in different countries is called the
 - A. Human development index
 - B. Purchasing power parity
 - C. Gini coefficient
 - D. Composite indicators

4. The standard measure of average living standards in a country is
 - A. Gross national income per capita, adjusted for differences in the cost of living between countries
 - B. Gross national product expressed in current prices
 - C. Gender equality and opportunities for women
 - D. Civil liberties and freedom of speech

5. Composite indicators are better signs of economic development than single indicators because they
 - A. Include more than one measure of economic development
 - B. Account for gender inequalities and opportunities for women
 - C. Reveal insight into the overall health of the country
 - D. Allow economists to draw broad conclusions about the level of standards of living

6. If the economy is closed (does not engage in foreign trade and investment) then its GDP would
 - A. Exceed its GNI
 - B. Be lower than its GNI
 - C. Equal its GNI
 - D. Equal its HDI

7. Education indicators do not include
- A. Adult literacy rates
 - B. Enrolment rates for primary, secondary and tertiary education
 - C. Expected and mean (average) years of schooling
 - D. Gender participation rates and gender inequalities
8. Which of the following is not a dimension of the Human Development Index?
- A. Healthcare
 - B. Education
 - C. Multidimensional poverty
 - D. Living standards
9. In the Human Development Index, a decent standard of living is best measured by
- A. Gross national income per capita
 - B. Real gross national product
 - C. Female participation rates
 - D. Access to healthcare and education
10. Health indicators do not include
- A. Life expectancy (longevity)
 - B. Infant mortality rates
 - C. Access to basic education
 - D. Expenditure on health care as a percentage of GDP
11. Which statement does not apply to the Human Development Index?
- A. It is a composite indicator of economic and social welfare in a country
 - B. Education indicators measure the mean years of schooling and the expected years of schooling
 - C. Health indicators measure longevity, measured by the proportion of the population who reach a minimum life expectancy of 20 years and a maximum life expectancy of 85 years
 - D. Standards of living measured by gross domestic product per capital, adjusted for purchasing power parity across countries
12. For some countries, such as the Philippines and Indonesia, many migrant workers remit large amounts of money from abroad, so their
- A. GNI exceeds GDP
 - B. GDP exceeds GNI
 - C. HDI exceeds GNI
 - D. HDI exceeds GDP
13. Suppose the exchange rate between Wendelville and Mandelock is currently 1 villes to 5 locks. If a Big Mac burger costs 3 villes and there is purchasing power parity, the price of a Big Mac burger in Mandelock would be
- A. 1.67 locks
 - B. 6 locks
 - C. 15 locks
 - D. 16.67 locks

14. Which option is most likely to represent the HDI figures shown below (countries are shown in order)?

Country	HDI	Country	HDI
A	0.981	C	0.547
B	0.718	D	0.336

- A. Brazil, Australia, India, Sierra Leone
- B. Australia, Brazil, India, Sierra Leone
- C. Australia, India, Brazil, Sierra Leone
- D. Brazil, Australia, Sierra Leone, India

15. Which option is most likely to represent the GDP per capita, at purchasing power parity, shown below (countries are shown in order)?

Country	GDP (PPP) \$	Country	GDP (PPP) \$
A	88,787	C	25,554
B	49,990	D	6,099

- A. Hong Kong, Luxembourg, Portugal, Swaziland
- B. Hong Kong, Luxembourg, Swaziland, Portugal
- C. Luxembourg, Hong Kong, Portugal, Swaziland
- D. Luxembourg, Hong Kong, Swaziland, Portugal

16. Economic growth tends to increase the per capita but this does not necessarily mean that the increases due to the differences between development and growth.

- A. HDI, GNI
- B. GNI, HDI
- C. GDP, PPP
- D. GNI, PPP

17. If the HDI increases, this is an indicator of all the following except

- A. Human capital formation
- B. Higher standard of education and health
- C. Economic development
- D. Economic growth but not higher quality of life

18. Limitations of the Human Development Index do not include

- A. The inability to distinguish between growth and development
- B. It fails to take account of qualitative factors, such as gender inequalities and political freedoms, such as human rights
- C. The HDI figure does not take account of income distribution (inequitable development is not human development)
- D. It ignores environmental concerns linked with economic growth and development

19. Key weaknesses of the HDI do not include
- A. Ignoring focus on sustainable development (consuming more now may mean a lower standard of living in the future)
 - B. The negative externalities linked to increased production and consumption
 - C. Cultural differences and interpretations of the meaning of quality of life
 - D. The need to use complex composite indicators to measure development
20. Which of the following is not used as a single indicator of economic development?
- A. Education indicators
 - B. Health indicators
 - C. Purchasing power parity exchange rates
 - D. Human development index

	Country A	Country B	Country C
Year 1	100	100	100
Year 2	100	100	100
Year 3	100	100	100
Year 4	100	100	100
Year 5	100	100	100
Year 6	100	100	100
Year 7	100	100	100
Year 8	100	100	100
Year 9	100	100	100
Year 10	100	100	100

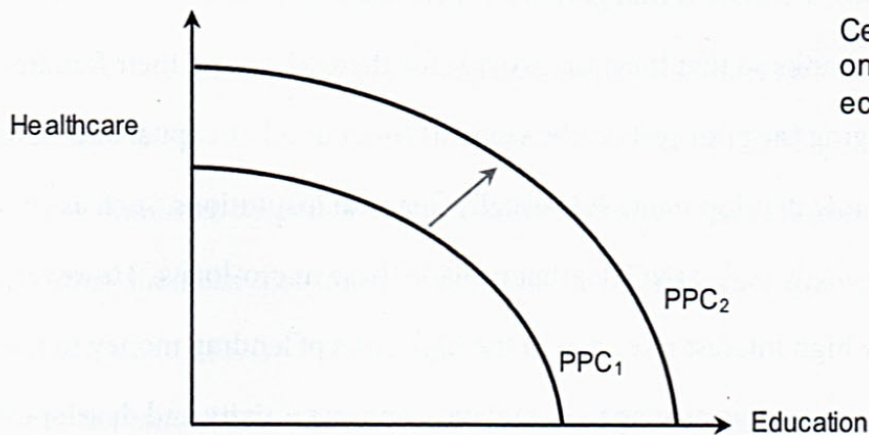
Economic development – The role of domestic factors

Task 1 – Complete the missing words...

Five domestic factors contribute to the economic development of less economically developed countries (LEDCs):

1. Education and health

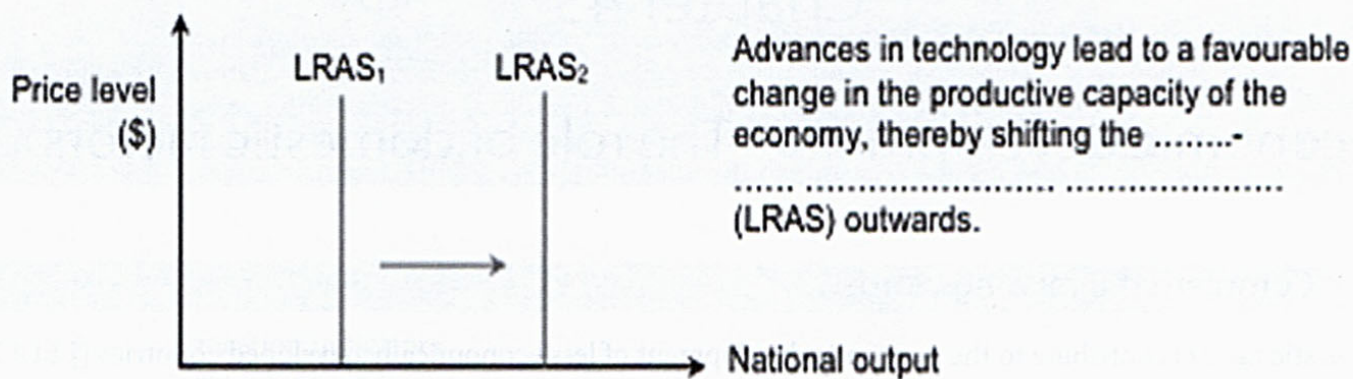
As a-side policy, investment in education and healthcare will shift the long run aggregate curve to the right. This leads to an increase in real national income without the general price level having to increase. Alternatively, this can be shown using a (PPC) diagram:



According to children's charity UNICEF, women who have received an education encourage their own children to attend school whereas children without educated mothers are at least twice as likely not to attend level education. However, many cultures prefer boys to attend school with girls expected to stay at home to help with household chores. Similarly, access to healthcare has a direct impact on economic For example, women in LEDCs who have greater control over healthcare have better nutrition and are therefore more productive.

2. Technology

The development and use of appropriate technology is a key domestic factor determining the scope of economic development. The accumulation of capital, perhaps through micro-finance schemes, allows people to be more productive, e.g. Pakistani woman using sewing machines are far more productive than those who do things by hand. Thus, the use of technology allows these women to earn more, thereby raising their of living.



However, the economic development of the country can be disrupted if foreign exchange is needed to purchase spare parts and pay for expensive maintenance of the technology.

3. Credit and micro-credit

Credit refers to the ability to money. A microcredit program, developed by economist and Nobel Peace Prize winner Muhammed Yunus (2006), is a system that grants-sized loans to-income people who cannot borrow money from regular banks so that they can provide for themselves and their families. In particular, micro-credit is aimed at encouraging the poor (especially women) to accumulate capital and develop an entrepreneurial culture, leading to economic development. It is usually financial institutions, such as commercial banks, and-..... (NGOs) that provide these micro-loans. However, most provide micro-credit with relatively high interest rates due to the high risks of lending money to the poor. By contrast, charge relatively lower interest rates, striving to stimulate economic activity and development.

4. Empowerment of women

There is a correlation between the empowerment of women (gender equality) and economic development. Gender equality would end social and cultural against females. For example, in some Islamic countries, women are not allowed to work or drive, thereby hindering the productivity in these nations. The empowerment of women can be promoted via the use of-credit schemes, such as been the case for women in India and Bangladesh. It is positive for economic development as it leads to an increase in the quantity (and possibly) quality of the workforce, leading to a more efficient use of the economy's resources.

Empowerment of women allows them to gain status and confidence, having a huge impact on their self-esteem and productivity. In the long term, this will also impact on child birth and child healthcare, both of which are vital to economic The opposite is true for countries such as Ghana and Rwanda that fail to empower women as approximately their population will suffer from productivity, slower economic growth, and therefore weaker economic development.

- a. Reducing excess female mortality and closing education gaps where they remain
- b. Improving access to economic opportunities for women
- c. Increasing women's voice and agency in the household and society
- d. Limiting the reproduction of gender inequality across generations.

5. Income distribution

Income distribution refers to how the income of a country is spread amongst its Income exists when national income is not proportionally distributed. Economic development depends not only on the growth in national income but also on the of income. Income inequalities hinder economic development as the poor do not have access to education, healthcare, credit or micro-credit. A key method to redistribute income (from the rich to the poor) to ensure a fairer distribution is an effective tax system. However, it can be difficult for governments in LEDCs to raise tax revenues due to three main reasons:

- such a proportion of the population pay income taxes, especially as most people are poor and because there is often a unofficial (informal) market in LEDCs
- there is minimal corporate activity so corporation tax revenues are, especially as LEDC governments may offer financial assistance to domestic firms and offer financial incentives to facilitate (FDI)
- due to the lack of international trade in many LEDCs, there is minimal import tax revenues.

Task 2 – True or False? 👍👎

	True / False
a. Corruption in countries such as Kenya and Zimbabwe has reduced the effectiveness of the legal system in such countries.	
b. Trade in the unofficial (informal) market in some countries such as Angola and India has far exceeded the recorded gross domestic product of these countries.	
c. Political instability and conflict are domestic factors that impact on the economic development of a country.	
d. All trading activities in the unofficial market are unrecorded so are therefore illegal.	
e. Non-governmental organizations (NGOs) have been active in microcredit programs.	
f. Micro-credit refers to small loans to very poor people for self-employment projects that generate income so they can care for themselves and their families.	
g. Micro-credit schemes have educational and social benefits as qualifying participants must attend classes on financial management.	
h. Micro-credit is more important than innovation and the adoption of technology for economic development.	
i. Ignoring gender disparities is detrimental to people's wellbeing and to the economic development of countries.	

- | | |
|----|--|
| j. | The lack of property rights in LEDCs is a major source of poverty as individuals and firms have little, if any, collateral to borrow money to fund development projects. |
|----|--|

Task 3 – Explain...

- a. How corruption reduces the effectiveness of domestic factors that propel economic development.
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- b. Apart from corruption, one other problem associated with the role of domestic factors for development.
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-
- c. Two economic consequences of political conflict and war, such as Sudan’s second civil war between 1983 and 2005.
-
-
-
- d. Two disadvantages associated with using micro-credit systems.
-
-
-

Task 4 – Multiple Choice

1. Factor endowments are
- A. Natural resources that help the growth and development of a country
 - B. Labour resources that help the growth and development of a country
 - C. Capital resources that help the growth and development of a country
 - D. All resources that help the growth and development of a country
2. Which of the following is not a determinant of who qualifies for micro-credit?
- A. How much debt the borrower can afford
 - B. The existing assets of the borrower
 - C. How the borrower has handled debt obligations in the past
 - D. Whether the funds are to be used for profit-making projects
3. Which statement does not apply to micro-credit?
- A. Loans of small amounts to poor individuals in LEDCs
 - B. Loans of small amounts to poor individuals, organizations and governments
 - C. A method used to promote economic growth and development
 - D. Aimed at promoting an entrepreneurial spirit in the country

4. The main criticism of micro-credit schemes is that they
- They do not create jobs on a large enough scale to shift the productive capacity of the economy
 - They impose high rates of interest on the poorer members of society
 - Firms cannot access this source of finance
 - Funds are misused without any corresponding increase in output
5. Political stability is important to economic development because
- International agencies such as Oxfam and the IMF cannot operate effectively without political stability
 - Non-government organizations cannot provide services to citizens without political stability
 - All countries have problems with administration of tax systems
 - Infrastructure and technological progress cannot happen without political stability
6. Which statement below does not explain why a lack of infrastructure hinders the chance for economic growth and development?
- Limited opportunities for international trade as goods cannot be easily transported from one area to another
 - Production is disadvantaged if power supplies are unreliable
 - Sanitation is vital for people's health
 - Innovation and technology are essential for growth and development
7. Which statement best outlines the major advantage of micro-credit schemes?
- They improve income distribution but may hinder gender equality
 - They improve gender equality although may hinder income distribution
 - They enhance both gender equality and income distribution
 - They empower women in family decision-making
8. Which statement is incorrect?
- The World Bank and United Nations are supporters of microcredit schemes
 - LEDCs prefer labour-intensive technologies to capital-intensive technologies for economic development
 - Empowering women is a key development strategy to reducing poverty in LEDCs
 - Ineffective tax regimes in LEDCs have hindered income redistribution
9. Gender inequality is a barrier to economic development and prosperity because
- Female workers in LEDCs are more productive than their male counterparts
 - On average, there are more females than males in LEDCs
 - It limits both the quantity and quality of labour in the production process
 - Women are more likely to encourage their own children to have an education
10. What do the five domestic factors (education and healthcare, empowerment of women, credit and micro-credit, technology, and income distribution) have in common?
- They all have positive externalities for LEDCs
 - They are all funded by international debt and financial assistance
 - They give preference to women in LEDCs
 - Benefits can be seen immediately, if not in the short term

Chapter 44

Economic development – The role of international trade

Task 1 – Matching exercise

Match the key term with the correct explanation:

Key term	Definition
1. Bilateral trade agreements	a. The index of export prices to import prices. Primary sector output tends to receive lower prices than tertiary sector output.
2. Diversification	b. A limitation to growth and development, this occurs when a country focuses output on a small range of products for trade.
3. Export promotion	c. The freeing up of international trade through means such as membership of the World Trade Organization (WTO).
4. Import substitution	d. A growth and development strategy that involves countries broadening their products and exporting to new markets.
5. Over-specialization	e. An outward growth and development strategy through trade with overseas customers.
6. Regional preferential trade agreements	f. The international organization that encourages fairer and freer international trade between its member countries.
7. Price volatility	g. International trade deals between two countries with promises to reduce and/or abolish trade barriers.
8. Terms of trade (HL Only)	h. Unstable market prices for primary sector products, such as agricultural output,
9. Trade liberalization	i. An inward growth and development strategy that encourages domestic output via policies such as tariffs and quotas.
10. World Trade Organization	j. International trade deals that rely on economic cooperation between member states located near to each other, e.g. EU.

Task 2 – True or False? 🍷 🍷

	True / False
a. Supporters of export promotion favour international trade whereas supporters of import substitution prefer protectionist measures.	
b. A country that adopts an outward development strategy, rather than an inward approach, benefits from a greater variety of goods and services being available.	
c. Bilateral trade agreements are a form of free trade agreement, but occur only between two countries.	
d. An import substitution strategy involves importing goods and services from low-cost countries rather than high-cost countries.	
e. LEDCs fail to specialize in the output of a few goods and services.	
f. Food and agricultural exports account for a high proportion of total export revenues for most LEDCs.	

g.	LEDCs that rely on the export of primary sector products tend to face a long-run improvement in their term of trade. <i>(HL Only)</i>	
h.	Volatility in commodity prices in less economically developed countries is a key factor in worsening their terms of trade. <i>(HL Only)</i>	
i.	The gains from international trade favour MEDCs due to their better terms of trade and the highly unequal income distribution in LEDCs. <i>(HL Only)</i>	

Task 3 – Multiple Choice

- Which statement does not apply to export promotion as a growth and development strategy?
 - It exposes domestic firms to become more competitive, resulting in greater efficiency, higher productivity and lower average costs of production
 - It enables firms to specialize
 - It allows firms to benefit from economies of scale
 - It involves imposing tariffs on non-member countries of a free trade area
- Which of the following development strategies is most likely to be used to protect infant industries?
 - Export promotion
 - Import substitution
 - Diversification
 - Bilateral trade agreements
- The international organization that oversees negotiations concerning the reduction of trade barriers between its members is called the
 - Free Trade Area
 - World Trade Organization
 - World Bank
 - International Monetary Fund
- Which of the following is not a drawback of import substitution as a growth and development strategy?
 - Consumers end up paying higher prices for goods and services
 - There is a loss of consumer surplus
 - Infant industries would have a stronger chance of survival under an export-led strategy
 - The use of import tariffs and quotas is detrimental to economic efficiency
- Which of the following will decrease if a country switches from an import substitution development strategy to an export promotion strategy?
 - Competitive exports in the country
 - Consumer choice in the country
 - The use of modern technology in the country
 - Monopoly power of domestic firms
- Which statement below does not apply to the World Trade Organization?
 - It has the right to create favourable trade terms for less economically developed countries (LEDCs)
 - It has the right to sanction members who violate their trade agreements
 - It supports and advocates trade liberalization
 - Member states can impose tariffs and non-tariff barriers to non-member countries

7. A potential drawback with bilateral trade agreements is that
- A. There is a lack of trade barriers to protect the domestic economy
 - B. Export costs are likely to fall
 - C. Foreign goods from the partner country may be much more attractive to the consumer
 - D. One of the countries is highly likely to cheat, thereby leading to the collapse of the trade deal
8. Which growth and development strategy does a less economically developed country use when erecting trade barriers to encourage the purchase of domestically produced goods?
- A. Expenditure reducing policies
 - B. Export promotion
 - C. Import substitution
 - D. Multilateral trade agreements
9. What is not created with bilateral trade agreements such as those between Mexico and the USA?
- A. An increase in export earnings for both countries
 - B. Job opportunities in both countries
 - C. An increase in gross domestic product
 - D. Trade diversion between the partner countries
10. A problem with multilateral trade agreements such as with the European Union is that
- A. Many trading partners create huge opportunities for economies of scale
 - B. Wealthier nations such as Germany have had to bail out weaker partners such as Portugal, Italy, Greece and Spain during the euro currency and debt crisis
 - C. Some member countries will be tempted to adopt import substitution policies
 - D. Some member countries will be tempted to adopt export promotion policies
11. Which of the following is not a claimed benefit of being a member of the World Trade Organization?
- A. The system helps promote peace and economic harmony between all its members
 - B. Freer international trade helps to reduce the costs of living for citizens in member countries
 - C. Trade disputes are independently and constructively handled between the member countries themselves
 - D. Increased international trade stimulates economic growth and development for the global economy
12. Which of the following is not a drawback of LEDCs and developing nations specializing in the production of primary sector products for export?
- A. The prices of primary sector products are highly volatile and often exhibit a downwards trend
 - B. The supply of primary sector products tends to be highly inelastic in supply so cannot respond quickly to changes in the market
 - C. The demand for primary sector products tends to be highly income inelastic
 - D. Technological progress is relatively slow for primary sector products
13. Which of the following is not a consequence of a long term decrease in the price of primary sector products for LEDCs?
- A. A decline in export earnings for LEDCs
 - B. A fall in domestic employment
 - C. Deteriorating balance of payments
 - D. Higher demand-pull inflation in the LEDCs

14. Which statement does not explain why price volatility of primary sector output in LEDCs and developing countries hinders their economic growth and development?
- A. External factors such as adverse weather conditions make price predictions highly inaccurate
 - B. Demand for primary sector output is price inelastic in demand
 - C. Investment planning is far more complex in an environment of fluctuating prices
 - D. Price volatility creates uncertainty for international trade
15. Most LEDCs struggle to access international markets due to
- A. Protectionist measures imposed by MEDCs in trading blocs such as the European Union (EU) and the North America Free Trade Agreement (NAFTA)
 - B. The lower input prices in MEDCs
 - C. The oversupply of goods and services in MEDCs
 - D. The drawbacks of diversification to LEDCs
16. MEDCs such as France, the UK and USA have been criticized for their continual
- A. Support of domestic agricultural schemes by subsidizing their own farmers
 - B. Export promotion policies with each other
 - C. Multilateral trade agreements
 - D. Policies of diversification to aid their own economic growth and development
17. Benefits of regional trade agreements between LEDCs or between developing nations do not include
- A. Trade creation between the members as a result of economic cooperation
 - B. Trade creation between the members as a result of larger markets being formed
 - C. A decrease in the dependency of more economically developed countries
 - D. Reduced bargaining power with more economically developed countries
18. Which of the following is not an example of a regional trade agreement?
- A. Association of South East Asian Nations (ASEAN)
 - B. Asia Pacific Economic Cooperation (APEC)
 - C. Organization of Economic Cooperation and Development (OECD)
 - D. European Union (EU)
19. Which of the following is not a limitation on the economic growth and development of LEDCs and developing countries? (HL Only)
- A. Over-specialization in the output of a limited range of products for export
 - B. Price volatility and poor terms of trade for primary sector output
 - C. Limited access to compete with MEDCs operating in free trade areas
 - D. Regional preferential trade agreements rather than multilateral trade agreements
20. A long-term deterioration in the terms of trade for an LEDC will not (HL Only)
- A. Accelerate the debt problem for the LEDC
 - B. Reduce standards of living for the citizens of the LEDC
 - C. Make international trade more difficult for the LEDC
 - D. Lead to lower levels of unemployment in the LEDC

Chapter 45

Foreign Direct Investment and Multinational Corporations

Task 1 – Complete the missing words

Foreign direct investment (FDI) is undertaken by multinational corporations (MNCs). FDI occurs when firms invest in countries, such as Nike's production plant in Indonesia or Toyota's production plant in the UK.

In its simplest form, MNCs are businesses that operate in or more countries, such as McDonald's, Coca-Cola and L'Óreal.

MNCs are attracted to LEDCs because they are often well-endowed in resources that can be best exploited using the technology and know-how of MEDCs. LEDCs present many opportunities for MNCs, such as access to large and often fast-growing markets such as Indonesia and Vietnam. It therefore makes financial and logistical sense to establish production and marketing facilities in or near these (larger) overseas markets.

Economic development and cooperation have encouraged MNCs to relocate to LEDCs to exploit costs of production with regulation on capital movements. Such investments require long term commitment from MNCs.

MNCs spend money on FDI in order to boost their revenue and profit, rather than primarily to promote economic development. After all, firms are not in business to create social welfare but to look after the financial interests of their and shareholders. Hence, pessimists argue that any claim of corporate social responsibility (CSR) is simply a marketing gimmick and a form of-..... competition. By contrast, governments and development institutions, such as the IMF and World Bank, focus on economic

Task 2 – True or False?

	True / False
a. Foreign direct investment is undertaken by multinational corporations.	
b. The promotion of freer international trade has been a driving force for increased foreign direct investment.	

c.	Investment through the purchase of shares of foreign companies is an example of foreign direct investment.	
d.	Higher levels of foreign direct investment are an indicator of globalisation.	
e.	The vast majority of the world's FDI come from mainly industrialised nations.	
f.	Foreign direct investment helps to improve the infrastructure of a country.	
g.	If Africa increases its FDI to \$60bn in China whilst the latter invests \$100bn in the former, then Africa has a net outflow of FDI.	
h.	Foreign direct investment can enable MNCs to benefit from access to both new markets and cheaper factor resources.	
i.	FDI is far more stable and long-term for economic development than financial aid.	
j.	Ceteris paribus, foreign direct investment in LEDCs shift both the long run aggregate supply and aggregate demand curves to the right.	

Task 3 – Explain...

a. The meaning of foreign direct investment (FDI).

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b. Two benefits to MNCs operating in overseas markets.

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c. Two drawbacks of the presence of MNCs in less economically developed countries.

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d. Two benefits of FDI and MNCs to the host LEDC countries.

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Task 4 – Multiple Choice

1. Which of the following does not constitute foreign direct investment?

- A. Multilateral aid
- B. Investment from multinational companies
- C. Joint ventures and strategic alliances
- D. Technology transfer

2. Which of the reasons below is least likely to be a reason for foreign direct investment by a multinational corporation?
 - A. Increased sales revenue
 - B. Higher levels of profit
 - C. Economic development
 - D. Increased shareholder value

3. An example of foreign direct investment is
 - A. Financial bailout of Spain from the G20 economies
 - B. McDonald's opening a production plant in Indonesia
 - C. Foreign aid from Germany to Bangladesh
 - D. The USA purchasing government bonds issued by Greece

4. Driving forces behind foreign direct investment in LEDCs do not include
 - A. The rise in importance of free trade areas (trade blocs)
 - B. Lower cost opportunities in LEDCs
 - C. Wages in LEDCs rising above subsistence levels
 - D. The demise of communism in countries such as Russia and China

5. Which of the following is least likely to be a reason for MNCs investing in foreign countries?
 - A. Benefits of economies of scale in operating at a larger scale
 - B. Increased customer base
 - C. Opportunities to avoid tariffs and other protectionist measures by operating within foreign countries
 - D. The nature and scale of infrastructure in less economically developed countries

6. Which statement is not correct?
 - A. FDI is money invested into business operations abroad by MNCs
 - B. MNCs have production facilities and/or service operations outside the country in which they were established
 - C. MNCs involved in extracting natural resources in LEDCs are unlikely to leave once the resources are exhausted
 - D. Domestic firms that are relatively uncompetitive will suffer from the presence of MNCs

7. China's investment projects in Latin America and South Africa are examples of
 - A. Diversification
 - B. Foreign direct investment
 - C. Profit repatriation
 - D. Trading blocs

8. The presence of MNCs brings about disadvantages for the host country including
 - A. The loss of economic sovereignty
 - B. A regulatory framework that encourages profit repatriation
 - C. The exploitation of low cost opportunities
 - D. Environmental degradation

9. Multinational corporations

- A. Pose a threat to the cultural, political and economic identity and strength of developing nations
- B. Work with reputable governments to make long investments in their countries
- C. Underpay and exploit their workers
- D. Consider the environmental implications of their actions in LEDCs

10. Which statement about foreign direct investment is incorrect?

- A. FDI allows the transfer of technology and work practices from MEDCs to LEDCs
- B. FDI can make domestic producers in host countries become more efficient and competitive
- C. FDI does not improve the human capital development in the LEDC
- D. Profits generated by FDI contribute to tax revenues in the LEDC

Chapter 46

The roles of foreign aid and multilateral development assistance

Task 1 – Vocabulary Quiz: Types of aid

Identify the correct type of aid from the clues below. *Hint: answers appear in alphabetical order.*

Key Terms	Description
	A form of financial development assistance from one government to another, often according to political interests.
	A form of official development assistance given by governments and other agencies, such as the World Bank, to support the economic development.
	This form of altruistic financial assistance is typically used to save lives and maintain human dignity in response to natural disasters and crises.
	Form of financial assistance channelled through international organizations, such as the World Bank, or non-governmental organisations such as Oxfam.
	This refers to foreign aid from donor governments, rather than from non-governmental organizations.
	Financial assistance that is granted for a specific sector, e.g. funding of the education sector or the financial sector of a country.
	This form of assistance is given with conditions attached, such as the need to spend the financial aid on buying goods produced in the donor country.

Task 2 - True or False?

	True / False
a. The majority of loans from the World Bank are for physical capital projects.	
b. Most donors expect foreign aid to be repaid in the future.	
c. Bilateral foreign aid is often a feature of tied (conditional) aid from the donor government.	
d. Loans impose interest and repayment burdens, especially as many LEDCs suffer from high domestic inflation and debts have to be repaid in foreign currencies.	
e. Multilateral aid can be used as an alternative to foreign direct investment to create a capital account surplus in less economically developed countries.	
f. Multilateral aid is usually untied aid.	
g. LEDCs tend to prefer trade on more favourable terms rather than outright aid.	

h.	The European Union providing development assistance to former colonies such as African states is an example of multilateral foreign aid.	
i.	Non-governmental organizations (NGOs) pursue wider social aims, usually on a small scale, and operate independently of any form of government, e.g. Greenpeace and Oxfam.	
j.	The International Monetary Fund (IMF) is an international organization with the purpose of promoting and overseeing global monetary cooperation to promote sustainable economic growth.	
k.	The World Bank is an organization that lends money to countries for development projects such as irrigation, roads, schools, hospitals and transportation.	

Task 3 – Explain...

a. Two drawbacks of relying on foreign aid for economic development.

b. Two advantages of financial aid for economic development.

c. Two different types of financial aid for economic development.

d. The difference between foreign aid and foreign direct investment.

Task 4 – Multiple Choice

1. Which of the following does not help low-income countries to achieve economic development?

- A. Multilateral aid
- B. Loans
- C. Protectionist measures
- D. Training and educational programmes

2. Humanitarian aid, rather than development aid, does not consist of

- A. Medical aid
- B. Food aid
- C. Emergency relief assistance
- D. Assistance for infrastructure development programs

3. Which international organization lends money to LEDCs for economic development projects?
 - A. World Bank
 - B. International Monetary Fund (IMF)
 - C. World Trade Organization (WTO)
 - D. Organization of Petroleum Exporting Countries (OPEC)

4. Successful foreign aid programs will
 - A. Shift the donor country's production possibilities to the right
 - B. Shift the recipient country's production possibilities to the right
 - C. Cause a depreciation in the country's exchange rate
 - D. Cause an appreciation in the country's exchange rate

5. Unofficial aid is transferred through
 - A. The World Bank
 - B. The International Monetary Fund
 - C. Non-governmental organizations (NGOs)
 - D. Governments of donor countries

6. Typical aid projects of NGOs do not include
 - A. Health care
 - B. Education
 - C. Sanitation and clean water
 - D. Employment opportunities

7. Which statement below does not apply to the International Monetary Fund?
 - A. Any country may apply to be a member of the IMF
 - B. Member states have access to information about the economic policies of all other members
 - C. It strives for economic growth and stability
 - D. It attempts to fix exchange rates between member states

8. Loans and financial aid from large agencies are often made on the condition that changes are made in government policy in the recipient country. This form of aid is known as
 - A. Tied aid
 - B. Multilateral aid
 - C. Bilateral aid
 - D. Official aid

9. Which of the following is a valid reason (or advantage) for tied aid?
 - A. It ensures financial aid is used for appropriate purposes whilst benefiting the donor country
 - B. Humanitarian reasons to help others in the world
 - C. Altruistic reasons to get people out of poverty
 - D. It ensures non-governmental organizations channel their funds to the right causes

10. The total sum of all government aid is known as
 - A. Official aid
 - B. Tied aid
 - C. Program aid
 - D. Project aid

11. Which of the following is not a reason why more economically developed countries (MEDCs) give foreign aid?
- A. Political reasons to win the support and cooperation of strategically important countries
 - B. Altruist (humanitarian) reasons to help others in the world
 - C. Expansion of world trade as countries become more economically developed
 - D. To aid countries following an economic downturn in their economy
12. Which of the following is not an example of development aid?
- A. Grants
 - B. Concessionary loans
 - C. Project aid for schools and hospitals
 - D. Humanitarian aid
13. A concessionary loan is a
- A. Loan without any interest repayments
 - B. Loan with comparatively lower interest rates than commercial banks, lent over a long period of time
 - C. Loan with comparatively lower interest rates than commercial banks, lent over a short period of time
 - D. Form of tied aid
14. Which organization(s) usually provide(s) local financial aid to improve infrastructure by providing funds for education, bridges, roads, or water irrigation systems?
- A. World Bank
 - B. International Monetary Fund
 - C. Non-governmental organizations
 - D. Governments of donor countries
15. Which of the following does not apply to the World Bank?
- A. It strives to support economic development
 - B. Its mission is to reduce poverty
 - C. Provide grants, low-interest loans and/or interest-free credit to LEDCs
 - D. Make finance available to members to meet their balance of payments needs

Chapter 47

The role of international debt

Task 1 – Complete the missing words...

Foreign debt (or debt) is money owed to foreign creditors, such as commercial banks, governments or international finance organizations such as the (IMF) and the Bank. Debts can be incurred by private individuals, businesses or the government. Debts are often incurred by LEDCs with weak institutions and poor infrastructure, seeking loans to develop their economies.

Quite often, LEDCs have to pay more for servicing their debts, perhaps due to interest rates or domestic inflation the value of their currency. This makes their debt financing become increasingly unsustainable, leading to further borrowing and escalating debts. In many cases, LEDCs incur huge debts (known as odious debt) when financial aid is misused by corrupt leaders. Indebtedness has led to many LEDCs having to their payments to banks and other lenders. Debt rescheduling means lengthening the time it takes to repay a loan.

Heavily indebted poor countries (HIPC) often have unpayable debts. This means that the debt incurred by the HIPC exceeds government revenue collected from, thus preventing the debt from ever being repaid. This has led to calls for MEDCs to write-off (forgive) these debts of in an attempt to restart or improve the economic prospects of However, this can mean the indebted countries become complacent (or reckless) because if they are protected from their irresponsible actions, they are more likely to be careless in the future. Also, the cancellation of debt does not work if the LEDC government is and misuses its finances on items such as weapons, which it could not have afforded if it were still debt. Instead, debt can be granted on the condition that HIPC governments meet a range of economic management and performance targets, such as poverty-reduction programs.

Task 2 – Vocabulary Quiz

Identify the correct key term from the clues below. *Hint* – all answers appear in alphabetical order:

Key term	Definition
	This refers to aid in the form of capital, food or finance given or loaned in return for policy reforms and structural adjustment.
	These are financiers (such as individuals, commercial banks, governments and international finance organizations) who lend money to others.
	Also known as external debt, this refers to loans that need to be repaid to overseas lenders such as foreign commercial banks and governments.
	A group of LEDCs with enormous levels of poverty and outstanding debt, making them eligible for special assistance from the IMF and World Bank.
	The international organization that monitors the balance of payments to detect any major problems and acts as an international lender of last resort.
	This international finance organization is concerned with making loans to LEDCs to assist in their economic development.

Task 3 – Explain...

a. The difference between internal and external debt.

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b. Two consequences to LEDCs that face international debt problems.

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c. One reason why some economists argue for the forgiveness of debt for highly indebted poor countries (HIPC).

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Task 4 - True or False?

	True / False
a. Many less economically developed countries (LEDCs) have borrowed more money than they can possibly pay back, so debts make them even poorer.	
b. Debt causes both economic and social instability.	
c. More economically developed countries (MEDCs) have an incentive to see the debt problem resolved as it can cause a major global financial crisis.	

d.	Debt is detrimental to the wellbeing of a LEDC.	
e.	Some nations spend more money on debt financing (repaying international debts with interest) than they spend on education or health care.	
f.	Indebtedness leads to debt financing.	
g.	An increase in inflation leads to an increase in servicing (financing) foreign debt.	
h.	In most LEDCs, the debt to GDP ratio has been declining as a smaller proportion of their national income comprises of debt.	
i.	International debt fosters sustainable economic development and social stability.	
j.	LEDCs are more likely to experience cost-push inflation than demand-pull inflation.	

Task 5 – Multiple Choice

- Which of the methods below is not advisable to combat the international debt problem of a country facing high inflation?
 - Focus resources on repaying debt rather than combating inflation
 - Focus resources on combating inflation rather than repaying debt
 - Focus resources on expanding GDP to reduce the debt-to-GDP ratio
 - Apply for debt rescheduling or debt forgiveness
- The figure compares the foreign debt (including interest repayments) of a country with its export revenues is known as
 - Net capital inflows
 - Debt relief
 - Debt service ratio
 - Debt-to-GDP ratio
- Which statement is correct?
 - Domestic inflation means that foreign debts become harder to repay as the value of money decreased yet the debts have to be repaid in foreign currencies
 - Domestic inflation means that foreign debts become easier to repay as the value of the money borrowed decreases in real terms
 - External debts are added to domestic debt to give the total for internal debt
 - External debts subtracts incomes owed to people in debtor nations
- Drawbacks of servicing foreign debt do not include
 - The money could have been used to boost GDP, such as investments into long run projects like infrastructure or education
 - Debts take money away from funds for much-needed projects such as roads, schools and health care
 - Debt servicing does not necessarily deal with other causes of poverty in LEDCs such the need for trade liberalization policies
 - An increase in the debt-service ratio of the country

5. A danger in writing off (cancelling) the debts of heavily indebted countries is that
- The process is not financially viable for MEDCs
 - It does not resolve the problems of indebtedness
 - Complacency sets in as LEDCs may expect future debts to also be wiped out
 - Economic conditions would be attached to the writing off of international debts
6. Perpetual debts occur when
- A country takes out subsequent loans to service (pay for) older debts
 - Import expenditure in the economy exceeds export earnings
 - Bad debts occur, i.e. the borrower cannot afford to repay the loan
 - The real market value of a loan is lower due to the effects of inflation
7. Heavily indebted poor countries (HIPCs) suffer from debt overhang. What does this mean?
- External debts exceed the GDP of the country
 - Existing debt is so high that the HIPC finds it extremely difficult to borrow more money
 - Debts are so high that conditional assistance is imposed on the LEDC
 - The inability to deal with negative externalities
8. When would debt relief through debt rescheduling be most appropriate?
- When the borrowing nation suffers from a budget deficit
 - When the borrowing nation suffers from an economic recession
 - When the borrowing nation becomes classed as a highly indebted poor country (HIPC)
 - When the borrowing nation faces a balance of payments trade deficit
9. Which statement applies to the World Bank rather than to the International Monetary Fund?
- It is concerned with assisting countries facing urgent balance of payments problems
 - It makes long term loans to LEDCs to aid their economic development
 - It responds quickly to currency crises with emergency loans
 - It makes loans to both LEDCs and MEDCs
10. Which statement about the HIPC scheme is incorrect?
- HIPCs suffer from debt overhang
 - HIPCs are eligible for financial assistance (low-interest loans and debt relief) from both the IMF and the World Bank
 - HIPC debt relief includes both partial and complete debt forgiveness
 - HIPC debt relief requires nations to focus on eradicating corruption rather than poverty reduction programs

Chapter 48

The balance between markets and intervention

Task 1 – Matching exercise

Match the key term with the correct explanation:

Key term	Definition
1. Bureaucracy	a. Outward-looking macroeconomic policies used to stimulate growth and development through market forces.
2. Capital flows	b. The use of state power and authority to stimulate or control economic growth and development.
3. Complementary approach	c. The system, structure and regulations (administration) used to control activities in large organizations.
4. Dual economy	d. The movement of money for trade and investment with other countries and currencies.
5. Deregulation	e. The balanced use of both market orientated development policies and government intervention.
6. Good governance	f. Welfare system used to ensure all members of society have access to basic necessities, aimed at preventing poverty.
7. Infrastructure	g. The process of transferring ownership of a public sector asset to the private sector.
8. Interventionist policies	h. The reduction or removal of power and rules in a particular industry, to create competition within the industry.
9. Market-oriented policies	i. The moral conduct of public affairs and management of public resources for an economy to grow and develop.
10. Privatization	j. The existence of two distinct economic sectors within a country, resulting in different levels of economic development.
11. Social safety net	k. The physical structures required for the operation of society, e.g. road, rail and telecommunications networks.

Task 2 - True or False? 🗳️

	True / False
a. The benefits of economic growth will automatically trickle down to benefit the poorer members of society without any government intervention.	
b. The key benefit of market-oriented development policies, such as trade liberalisation, is that resources are allocated more efficiently.	
c. Floating exchange rates are an example of market oriented growth strategies.	
d. Development requires the government to provide a safe environment to protect people's property by establishing law enforcement agencies.	
e. Eradicating corruption is a prerequisite to economic development.	
f. Market oriented development policies focus on improving health, education and infrastructure to encourage economic development.	

g.	Due to advances in health technologies, it is possible for people to live longer without necessarily needing to have higher income per capita.	?
h.	Market-oriented policies such as trade liberalisation are essential for economic growth but do not ensure economic development.	

Task 3 – Multiple Choice

1. Market-oriented development policies are unlikely to cause
 - A. Market failures
 - B. Economic growth
 - C. The development of a dual economy
 - D. Equal income distribution

2. Government intervention is required to
 - A. Provide quality infrastructure (roads, ports, airports and telecommunications networks)
 - B. Limit excessive bureaucracy
 - C. Improve economic efficiency in terms of resource allocation
 - D. Stimulate a dual economy

3. Limitations of interventionist development policies do not include
 - A. Excessive regulation and bureaucracy
 - B. Poor planning
 - C. Corrupt governments
 - D. Income inequalities

4. Interventionist policies may be required to
 - A. Provide adequate housing to many members of society
 - B. Deregulate trade and industry
 - C. Protect firms from foreign competition
 - D. Encourage public ownership of property and other assets

5. Which economic system is most likely to use market-oriented development policies?
 - A. Dual economy
 - B. Planned economy
 - C. Mixed economy
 - D. Free market economy

6. Which of the following is not a market-oriented policy to encourage development?
 - A. Progressive tax systems to create incentives to work
 - B. Cuts in business taxes and capital gains taxes to encourage incentives to invest
 - C. Anti-monopoly regulation being used to encourage competition
 - D. Labour market reforms

7. A drawback of using taxes to increase incentives to work is that they
 - A. Can increase inequalities and relative poverty
 - B. Can create negative externalities
 - C. Can alter the allocation of scarce resources
 - D. Do nothing to encourage investment in human capital

8. Which of the following is not a justification for interventionist policies?
- A. Protecting the welfare of workers, such as setting minimum wages
 - B. Protecting the welfare of consumers, such as anti-monopoly policies
 - C. Provision of merit goods, such as education and healthcare
 - D. Interventionist policies are free of bureaucracy and corruption
9. Good governance requires all of the following, except
- A. Offering a welfare safety net for people who struggle through ill health and/or unemployment
 - B. Transparency in government policies
 - C. Concerted effort to deal with and limit corrupt practices
 - D. Applies to actions of government official only
10. Which statement is incorrect?
- A. Good governance requires accountable and transparent policies that are law-abiding
 - B. Rural-urban migration is a consequence of a dual economy
 - C. Hierarchical structures are often a key feature of bureaucratic organizations
 - D. The social safety net can be achieved without the need for government intervention