

# ***IB ECONOMICS***

***30 WORKSHEETS PACK & ANSWERS FOR IB ECONOMICS***

***UNIT 1: INTRODUCTION TO ECONOMICS***

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& Kenneth Tang



# IB ECONOMICS

## 30 WORKSHEETS & ANSWERS PACK

### UNIT 1: INTRODUCTION TO ECONOMICS

#### Introduction

This Worksheets Pack is a learning resource for students and teachers in the preparation for all topics within Unit 1 of the IB Economics course (first examinations 2022).

The resource pack contains 30 worksheets with a mix of practical short answer questions, crossword puzzles, fill-in-the-blank exercises, true and false questions, and revision exercises. All worksheets come with a full set of answers. They are easy to use for quick formative assessments. Students may also find this resource useful in their preparation for end-of-unit (summative) assessments, as well as their revision plans during the final countdown to their final IB Economics examinations.

The worksheets in this resource pack are arranged in syllabus order, but they can be used in any order at any appropriate time. Teachers will also find this resource useful to give to students to work on in lieu of their absence for personal and/or professional reasons. Each worksheet is accompanied with fully explained answers, which can be shared with students as appropriate. The answers contain notes that will be useful to supplement your students' knowledge, understanding and revision of the topics covered in Unit 1: Introduction to Economics.

#### About the Authors



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Prior to his international education career, Kenneth had various experiences in the corporate and commercial field. This included working in the Toronto office of Ernst & Young LLP in Canada as an audit staff accountant and completing the Management Trainee program with Citibank in Hong Kong. During his spare time, Kenneth enjoys following current affairs and strives to bring Economics and Business Management news into the classroom setting. Kenneth has a Bachelor of Commerce (B.Com) degree from The Rotman School of Management at the University of Toronto, where he specialized in Accounting, Finance and Economics. He obtained his teaching qualification, the Postgraduate Diploma in Education (PGDE), from the University of Hong Kong.

**IB ECONOMICS**  
**30 WORKSHEETS & ANSWERS PACK**  
**UNIT 1: INTRODUCTION TO ECONOMICS**

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**Worksheet 1**  
**The Nature of Economics**

1) Define the term *social science*. [2 marks]

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2) Outline **one** reason why Economics is considered to be a social science. [2 marks]

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3) Define the term *microeconomics*. [2 marks]

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4) Define the term *macroeconomics*. [2 marks]

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5) Explain the interdependent nature of microeconomics and macroeconomics. [4 marks]

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6) Identify **two** economic agents involved in making choices. [2 marks]

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7) Explain the choices that the economic agents identified in Question 6 make in the face of scarcity. [4 marks]

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## Worksheet 1 The Nature of Economics

### Answers

- 1) Define the term *social science*. [2 marks]

Social science is a discipline that combines principles and models which study the functional aspects and organization of human society and the determination of social relationships. Examples include Economics, Psychology and Anthropology.

- 2) Outline **one** reason why Economics is considered to be a social science. [2 marks]

Economics is considered as a social science as it scientifically approaches the study of human interactions and their behaviour with respect to the organization and decisions of human economic activities towards meeting their unlimited needs and wants with limited resources.

- 3) Define the term *microeconomics*. [2 marks]

Microeconomics is a branch of economics which deals with the economic behaviour of individual entities of an economy, such as an individual or a firm. Demand and supply theories (which are applied to a commodity) are core to the study of microeconomics.

- 4) Define the term *macroeconomics*. [2 marks]

Macroeconomics is a branch of economics which deals with the economy as a whole and its aggregates. For example, aggregate demand, aggregate supply, and the general price level are variables studied in macroeconomic.

- 5) Explain the interdependent nature of microeconomics and macroeconomics. [4 marks]

The study of microeconomics and macroeconomics are interdependent. Microeconomics seeks to explain the behaviour of individual economic agents in the context of the economy, such as the study of individual and market demand or supply for a good or service. This enables us to better understand the theories and functions of aggregate demand and aggregate supply in macroeconomics.

Similarly, the macroeconomic policies administered by the government are designed to influence and regulate individual and collective behaviour of these economic entities in the economy in order to achieve macroeconomic objectives.

- 6) Identify **two** economic agents involved in making choices. [2 marks]

The economic agents that are involved in making choices include:

- Consumers / households
- Producers, and
- The government

*Note:* The interaction among these economic agents lead to consumption, production, and investment decisions, all of which are subject matter of economics.

- 7) Explain the choices that the economic agents identified in Question 6 make in the face of scarcity. [4 marks]

In the face of scarcity, the choices that are related to the central problem of an economy are *what* to produce and in what quantity, *how* to produce and *for whom* to produce.

- Consumers make a choice between which kinds of goods and/or services they should buy and in what quantities in order to satisfy their needs and wants.
- Producers make a choice between what kinds of goods and/or services to produce/provide in the most efficient way (the choice of factors of production and technology)
- The government is concerned with making choices about how best to allocate its resources to maximize social welfare.

**Worksheet 2**  
**Opportunity Cost (1)**

1) Explain how the economic problem of scarcity leads to the problem of choice and opportunity cost. *[4 marks]*

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2) Explain why a Production Possibility Curve (PPC) is concave to the origin. *[4 marks]*

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3) For each of the examples below, explain the situation with respect to opportunity cost.

(a) Work hours versus leisure hours. *[2 marks]*

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(b) Government spending on new roads versus public health care services. *[2 marks]*

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(c) IB Economics versus IB Music (for an IB Diploma student). *[2 marks]*

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(d) A part-time job versus a full-time job. *[2 marks]*

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## Worksheet 2 Opportunity Cost (1)

### Answers

- 1) Explain how the economic problem of scarcity leads to the problem of choice and opportunity cost. [4 marks]

Every economy faces the problem of scarcity, i.e. resources are limited in relation to the wants and needs of people. Finite resources lead to individuals and firms to make choices, such as deciding over the allocation of resources to produce goods and services to satisfy the needs and wants of society.

Furthermore, since there are unlimited needs and wants, this cannot be met by using or allocating the economy's limited resources. As a result, this fundamental economic problem leads to the notion of opportunity cost, where firms must give up production of other goods and/or services in order to produce a certain product.

- 2) Explain why a Production Possibility Curve (PPC) is concave to the origin. [4 marks]

A Production Possibility Curve (PPC) is usually drawn concave to the origin due to the notion of increasing opportunity costs along the PPC. The underlying assumption of the PPC is that resources are limited in supply and any movements along the PPC represents the idea of opportunity cost. For example, an economy has to sacrifice increasing the quantities of a particular good or service in order to produce an additional unit of another good or service, due to the finite availability of resources in the economy.

- 3) For each of the examples below, explain the situation with respect to opportunity cost.

- (a) Work hours versus leisure hours. [2 marks]

When a person decides to spend his/her time at work, the person will enjoy the salary or wage which he/she could earn as a result of allocating his/her time to the work. However, by choosing to work, the person foregoes the enjoyment from the leisure hours sacrificed. Thus, the opportunity cost of spending the time on work is the lost opportunity to increase the person's enjoyment/utility from engaging in leisure activities.

- (b) Government spending on new roads versus public health care services. [2 marks]

If the government builds new roads, then the same money (and related resources) spent on the construction of these roads will not be available to be spent on improving public healthcare services and facilities - the next best alternative for the government. Therefore, the opportunity cost of spending money on new roads is the lost opportunity to increase access to public healthcare services.

- (c) IB Economics versus IB Music (for an IB Diploma student). [2 marks]

If a student chooses to study IB Economics as an elective in the IB Diploma (as not all students need to select a subject from Group 6), this would involve an opportunity cost which is the enjoyment and value that s/he would have received from choosing to study IB Music. This also involves making a choice about the efficient allocation of the student's study time (the amount of time needed to devote to learning Economics versus Music), as well as the future opportunities this choice could bring.

- (d) A part-time job versus a full-time job. [2 marks]

A person who decides to take up full-time employment is unable to spend more time on other activities such as leisure pursuits or time with their child(ren). This is because s/he has limited time in a day (the limited resource) in which s/he can devote to other possible alternatives. However, the person who decides to opt for part-time work gives up the opportunity of higher wages or salaries, and other employment benefits received by full-time employees.



**Worksheet 3**  
**Opportunity Cost (2)**

1) Using an example, explain whether or not the opportunity cost for any choice can be zero. *[4 marks]*

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2) Outline the importance of opportunity cost in terms of determining the payment for a factor of production. *[2 marks]*

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3) Outline the importance of opportunity cost in terms of determining the relative prices of goods and services. *[2 marks]*

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4) Indicate whether the following statements are **True or False** and support your answer with a justified reason.

(a) A free good is a good with zero opportunity cost. *[2 marks]*

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(b) If a government allocates resources to build a school, these resources will no longer be available for motorway construction. This choice illustrates the concept of macroeconomics. *[2 marks]*

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(c) Mass unemployment in the economy will shift the PPC to the left. *[2 marks]*

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## Worksheet 3 Opportunity Cost (2)

### Answers

- 1) Using an example, explain whether or not the opportunity cost for any choice can be zero. [4 marks]

The vast majority of goods and services incur an opportunity cost due to scarce / finite resources and unlimited needs and wants. The opportunity cost of a choice can be zero in the case of a decision that has no alternative, or if a product is a free good that does not require sacrificing any resources to produce them. For example, there is no option for a person of school age but to study; most students have to learn one way or the other. Hence, in such a situation where there are no alternatives open to them, the opportunity cost is zero. Free goods, like air, are in abundance and freely available and so do not have an opportunity cost.

- 2) Outline the importance of opportunity cost in terms of determining the payment for a factor of production. [2 marks]

Opportunity cost can be useful in determining the payment for a factor of production. For example, if a teacher works in an NGO (non-governmental organization) and is paid \$1,000 per month, this represents the minimum amount (or opportunity cost) that s/he has to be paid should another school, say in the private sector, wishes to attract his/her services.

- 3) Outline the importance of opportunity cost in terms of determining the relative prices of goods and services. [2 marks]

Opportunity cost can be used to determine the relative prices of different goods and services. For example, suppose a given amount of resources can produce 1 table or 3 chairs, then the price of 1 table will tend to be 3 times the price of that 1 chair, *ceteris paribus*.

- 4) Indicate whether the following statements are **True or False** and support your answer with a justified reason.

- (a) A free good is a good with zero opportunity cost. [2 marks]

**TRUE** – a free good, such as air or sea water, can be consumed by one person as much as possible without limiting its availability to others. Hence, the opportunity cost of these goods is zero.

- (b) If a government allocates resources to build a school, these resources will no longer be available for motorway construction. This choice illustrates the concept of macroeconomics. [2 marks]

**FALSE** – This decision or choice involves an opportunity cost as there would not be sufficient funds for building the school *and* for motorway (highway) construction. The latter represents the next best alternative foregone, i.e. the opportunity cost, rather than macroeconomics.

- (c) Mass unemployment in the economy will shift the PPC to the left. [2 marks]

**FALSE** – Mass unemployment does not cause a shift in the production possibility curve but makes the economy operate at a point inside the PPC instead. This is because the resources still exist in the economy but are underutilized, due to the inefficiencies caused by unemployed labour resources.

**Worksheet 4**  
**Opportunity Cost (2) – Quantitative Skills**

1) Using an example of your choice, illustrate the concept of opportunity cost. *[2 marks]*

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2) A producer receives two orders but can only complete one. The first order has a \$500 profit, and the second has a \$750 profit. The producer wants to fulfil the second order so declines the first order. What is the opportunity cost of this decision? *[2 marks]*

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3) A new trainee starts work at a bookshop. She is provided with the option of being paid \$50 cash or \$80 worth of book vouchers at the bookstore. She chooses the second option. What is the opportunity cost of this decision? *[2 marks]*

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4) A self-employed worker earns \$50 each hour. Today, she makes the decision to leave work early to watch her favourite musical. The ticket for the musical is priced at \$150 and lasts for two hours. What is the opportunity cost of this decision? *[2 marks]*

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5) An employee decided to use the train last month instead of driving to work. The train fare is \$350 per month. He calculated after a month that he spent \$250 less on petrol, and about \$25 less on car maintenance costs. What is the opportunity cost of his decision to use the train? *[2 marks]*

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6) A chef earns \$40 an hour and is considering paying someone else \$100 to clean her house. She estimates that it will take her four hours if she cleans the house herself. What is the opportunity cost of the chef choosing to do the cleaning herself? *[2 marks]*

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**Worksheet 4**  
**Opportunity Cost (2) – Quantitative Skills**

**Answers**

- 1) Using an example of your choice, illustrate the concept of opportunity cost. [2 marks]

*Examples will vary. An example is shown below.*

Opportunity cost refers to value of the next best alternative foregone when a choice or decision is made. For example, a person might be deciding between sleeping or watching a Netflix movie for the next 2 hours. If the person decides to watch the Netflix movie, the next best alternative is sleeping (earlier), i.e. sacrificing 2 hours of sleep. Hence, the opportunity cost of watching the Netflix movie is the 2 hour which could have been used to sleep.

- 2) A producer receives two orders but can only complete one. The first order has a \$500 profit, and the second has a \$750 profit. The producer wants to fulfil the second order so declines the first order. What is the opportunity cost of this decision? [2 marks]

By choosing the second order with a profit of \$750, the value of the next best alternative is foregone (i.e. \$500 profit from first order). Thus, the opportunity cost of choosing the second order over the first order is \$500 (which results in the producer having a net gain of \$250).

- 3) A new trainee starts work at a bookshop. She is provided with the option of being paid \$50 cash or \$80 worth of book vouchers at the bookstore. She chooses the second option. What is the opportunity cost of this decision? [2 marks]

The opportunity cost of this decision is \$50 cash. The trainee is foregoing the \$50 cash payment by choosing to receive the \$80 worth of book vouchers. This is based on the assumption that she values the benefits of the book vouchers more than the cash (as this choice has a monetary net gain of \$30 for the trainee).

- 4) A self-employed worker earns \$50 each hour. Today, she makes the decision to leave work early to watch her favourite musical. The ticket for the musical is priced at \$150 and lasts for two hours. What is the opportunity cost of this decision? [2 marks]

By choosing to go to the musical, the value of the next best alternative for the self-employed person is the \$50 per hour she could have earned by working (rather than leaving work early today). Since the musical lasts for two hours, the value of the best alternative foregone is  $\$50 \times 2 = \$100$ . As the ticket costs \$150, the total opportunity cost for watching the musical is  $\$100 + \$150 = \$250$ .

*Note: this assumption ignores additional opportunity costs (such as travel time and costs) due to the limited information provided.*

- 5) An employee decided to use the train last month instead of driving to work. The train fare is \$350 per month. He calculated after a month that he spent \$250 less on petrol, and about \$25 less on car maintenance costs. What is the opportunity cost of his decision to use the train? [2 marks]

- Cost of using train per month = \$350
- Cost of using the car per month =  $\$250 + \$25 = \$275$  (the opportunity cost)
- Hence, the opportunity cost of using the train =  $\$350 - \$275 = \$75$  per month

- 6) A chef earns \$40 an hour and is considering paying someone else \$100 to clean her house. She estimates that it will take her four hours if she cleans the house herself. What is the opportunity cost of the chef choosing to do the cleaning herself? [2 marks]

The opportunity cost of doing the cleaning herself is the lost salary for four hours, i.e.  $\$40 \times 4$  hours = \$160. Her net gain by choosing to work would be \$60, i.e.  $\$40 \times 4$  hours = \$160 minus the \$100 for paying someone else to clean her house.

**Worksheet 5**  
**Microeconomic and Macroeconomic Concepts**

1) Explain how microeconomic variables can influence the determination of macroeconomic policies. *[4 marks]*

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2) Distinguish between microeconomics and macroeconomics with reference to economic variables and the allocation of resources. *[4 marks]*

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3) State whether each of the following statements is true or false. *[11 marks]*

<b>Statement</b>	<b>True or False?</b>
(a) The study of price determination in individual markets is a subject matter of microeconomics.	.....
(b) Consumer behaviour and the pricing of factor inputs are studied in macroeconomics.	.....
(c) One of the major objectives of microeconomics is greater equity.	.....
(d) The reasons behind why a customer buys a product is a subject matter of macroeconomics.	.....
(e) The analysis of the behaviour of an individual in decision-making is a subject matter of microeconomics.	.....
(f) The aggregate of all the individual demand for goods and services in an economy forms the aggregate demand in the macroeconomy.	.....
(g) The decision about government expenditures and resource allocation are studied in microeconomics.	.....
(h) The decision about whether a tax should be levied on sugary drinks is a type of government intervention studied in microeconomics.	.....
(i) The goal to maintain a low and stable rate of inflation is an objective that is considered in microeconomics.	.....
(j) The study of the policies to promote more employment in an economy through the provision of training is a subject matter of macroeconomics.	.....
(k) The study of a specific market for a good or service in an economy is a subject matter of microeconomics.	.....

**Worksheet 5**  
**Microeconomic and Macroeconomic Concepts**

**Answers**

- 1) Explain how microeconomic variables can influence the determination of macroeconomic policies. [4 marks]

Microeconomics is the study of economic behaviour at the level of an individual firm and/or household, with the aim of promoting economic efficiency and economic welfare. Microeconomic variables (such as price or quantity demanded of a particular product) help to determine macroeconomic policies and concepts (such as aggregate demand being derived from the market demand for different goods and services, or the price of different products leading to an understanding of the general price level).

- 2) Distinguish between microeconomics and macroeconomics with reference to economic variables and the allocation of resources. [4 marks]

Economic variables: Microeconomics deals with the behaviour of changes in micro variables such as individual demand (for a good or service) or the price of a particular good or service. By contrast, macroeconomics deals with changes in the general or average price level, the overall employment level in the country, progressive tax systems to redistribute income and wealth in the economy, and so forth.

Allocation of resources: Microeconomics deals with allocating resources to the production of a particular good or service with reference to the price mechanism. By contrast, macroeconomics deals with resource allocation for the economy as a whole, with reference to the productive capacity of the economy and macroeconomic objectives (such as low and stable inflation and/or sustainable economic growth).

- 3) State whether each of the following statements is true or false. [11 marks]

Statement	True or False?
(a) The study of price determination in individual markets is a subject matter of microeconomics.	True
(b) Consumer behaviour and the pricing of factor inputs are studied in macroeconomics. <i>It is a matter studied in microeconomics</i>	False
(c) One of the major objectives of microeconomics is greater equity.	True
(d) The reasons behind why a customer buys a product is a subject matter of macroeconomics. <i>It is a matter studied in microeconomics</i>	False
(e) The analysis of the behaviour of an individual in decision-making is a subject matter of microeconomics.	True
(f) The aggregate of all the individual demand for goods and services in an economy forms the aggregate demand in the macroeconomy.	True
(g) The decision about government expenditures and resource allocation are studied in microeconomics. <i>It is a matter studied in macroeconomics</i>	False
(h) The decision about whether a tax should be levied on sugary drinks is a type of government intervention studied in microeconomics.	True
(i) The goal to maintain a low and stable rate of inflation is an objective that is considered in microeconomics. <i>It is studied in macroeconomics</i>	False
(j) The study of the policies to promote more employment in an economy through the provision of training is a subject matter of macroeconomics.	True
(k) The study of a specific market for a good or service in an economy is a subject matter of microeconomics.	True

**Worksheet 6**  
**The Economic Problem (1)**

- 1) Comment on the view that if resources are unlimited and freely available, Economics would not be an academic subject. [2 marks]

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- 2) Explain why the four factors of production are also called economic resources. [4 marks]

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- 3) Explain the factors that give rise to the fundamental (or basic) economic problem. [4 marks]

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- 4) State **two** factors that can shift an economy's production possibility curve (PPC) out to the right. [2 marks]

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- 5) State the **three** central questions for any economy regarding the allocation of scarce resources. [3 marks]

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- 6) Outline the meaning of the phrase *geographical mobility of labour*. [2 marks]

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- 7) Comment on the view that the problem of resource allocation would not exist if resources do not have any alternative economic use. [2 marks]

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## Worksheet 6 The Economic Problem (1)

### Answers

- 1) Comment on the view that if resources are unlimited and freely available, Economics would not be an academic subject. [2 marks]

If resources were unlimited and freely available, making rational choices would not be necessary and hence the concept of opportunity cost would not exist. Every person could have as much as s/he wanted of any good or service with no consideration of rationality in the behaviour of consumers nor the efficiency of producers. In such a hypothetical situation, Economics as an academic discipline (that studies the economic behaviour of different entities in an economy involved in making choices) would not be necessary.

- 2) Explain why the four factors of production are also called economic resources. [4 marks]

The four factors of production are land, labour, capital, and entrepreneurship. These are needed in the production of goods and services. They are also called economic resources because they are available in limited quantities and are collectively needed (as resources) to produce any given good or service. In other words, these economic resources (which have an opportunity cost) are the factor inputs used to produce goods and services.

- 3) Explain the factors that give rise to the fundamental (or basic) economic problem. [4 marks]

The basic economic problem is the dilemma of choice, which arises as a result of scarce resources. Since human wants (desires) are unlimited, the idea that resources are limited (finite) means that unlimited wants from humans cannot be entirely satisfied. Thus, every (rational) consumer will need to make a choice in order to satisfy his/her maximum wants given the scarce resources that are available.

- 4) State **two** factors that can shift an economy's production possibility curve (PPC) out to the right. [2 marks]

- An increase in supply of skilled and unskilled labour due to population and/or migration growth.
- Development and implementation of new production techniques.

- 5) State the **three** central questions for any economy regarding the allocation of scarce resources. [3 marks]

- *What* kinds of goods and services should be produced, and in what quantities?
- *How* should these goods and service be produced? This becomes a problem of choice of technologies and different combinations of factors of production.
- *For whom* to produce these goods and services? This is a problem of distribution of income among the owners of the factors of production.

- 6) Outline the meaning of the phrase *geographical mobility of labour*. [2 marks]

The geographical mobility of labour refers to the extent to which workers can move between different regions (geographical locations) of a country and/or between countries for employment purposes.

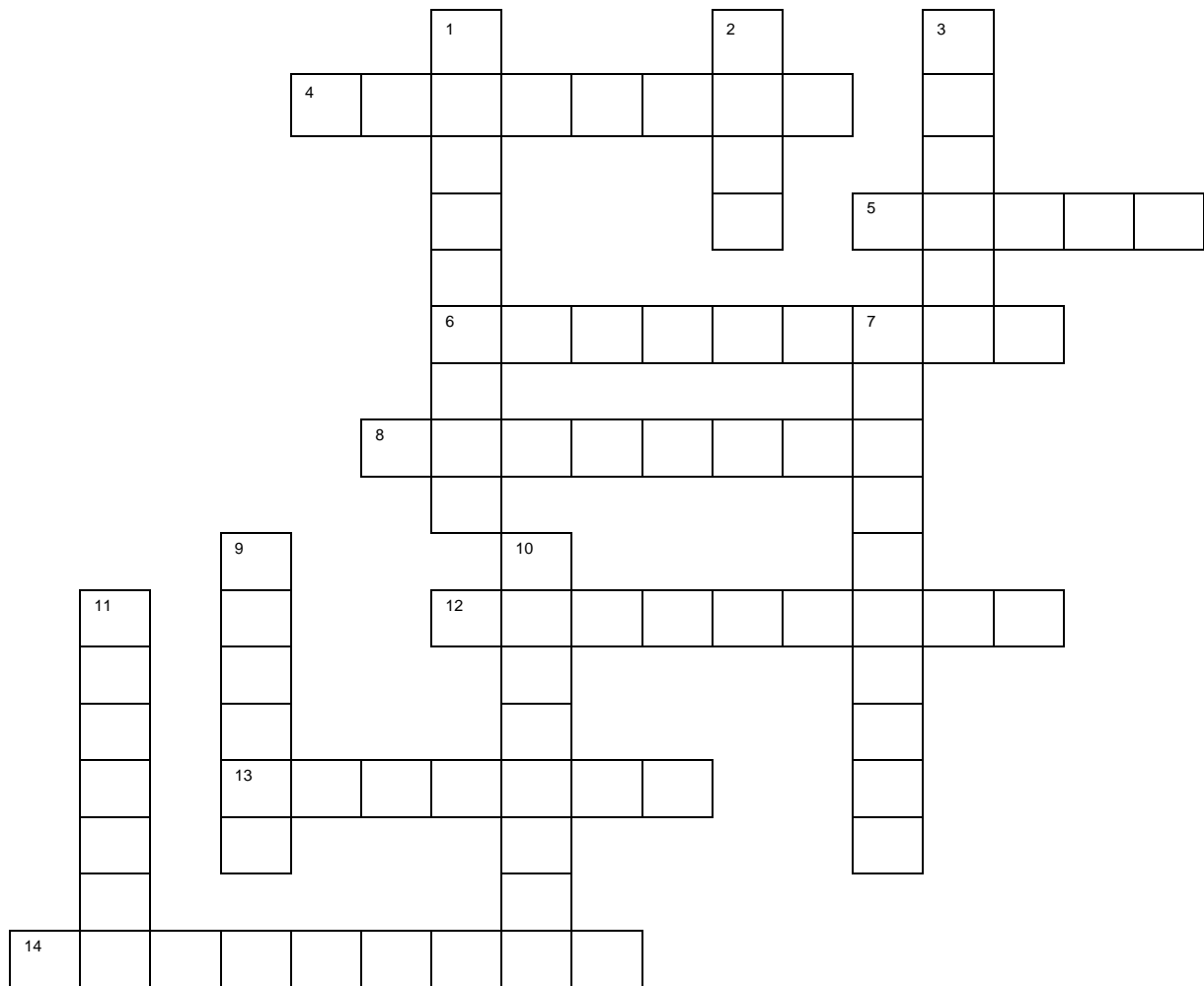
- 7) Comment on the view that the problem of resource allocation would not exist if resources do not have any alternative economic use. [2 marks]

The economic problem of resource allocation exists as economic resources are scarce in relation to the wants (desires) of people. Ordinarily, resources can be put to various alternate uses. If an economic resource can be put only to one specific use, then the problem of choice related to resource allocation would not arise. On the other hand, the lack of technological standards or development in an economy may limit the alternate uses of the available resource. In such situations, the problem of resource allocation would not exist.



## Worksheet 7 The Economic Problem (2) - Crossword

Read the clues and complete the following crossword.



### Across:

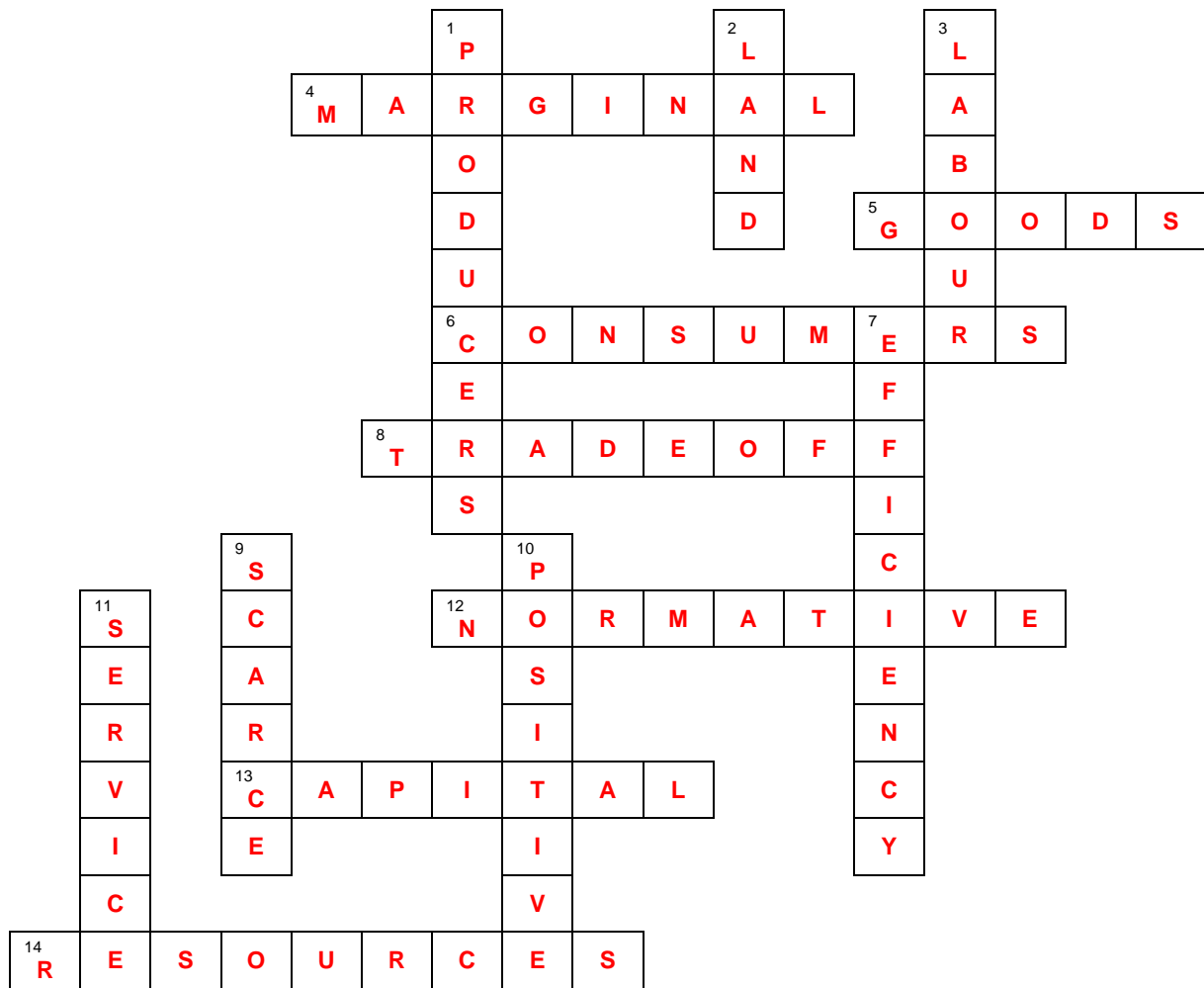
4. A type of analysis in economics which involves the observation of the impact on the additional utility or costs from an additional unit of output. (8)
5. Any physical or tangible product that provides utility to humans and satisfies their wants. (5)
6. The stakeholder group which engages in the purchase and use of a good or service. (9)
8. The alternatives faced by an individual when given two choices, which can be quantified by the concept of opportunity cost. (5-3)
12. Economic statements that are subjective in nature and contain feelings or opinions of different individuals. (9)
13. The factor of production that includes goods previously manufactured and are used to make other goods and services. (7)
14. These are finite (limited in supply) but are needed to produce any good or service. (9)

### Down:

1. A stakeholder group in the economy, ..... are responsible for the creation and supply of goods and services. (9)
2. The factor of production that includes natural resources used in the production of a good or service. (4)
3. The factor of production which is synonymous with human capital. (6)
7. The economic concept which refers to using the minimum input for the maximum output, whilst striving to minimize waste. (10)
9. The state of having limited resources to satisfy unlimited wants. (6)
10. An example of such a statement would be "Provision of free healthcare will increase the public sector expenditure". (8)
11. The provision of a ..... is an economic transaction where an intangible product is traded. (7)

## Worksheet 7 The Economic Problem (2) - Crossword

### Answers



#### Across:

4. A type of analysis in economics which involves the observation of the impact on the additional utility or costs from an additional unit of output. (8)
5. Any physical or tangible product that provides utility to humans and satisfies their wants. (5)
6. The stakeholder group which engages in the purchase and use of a good or service. (9)
8. The alternatives faced by an individual when given two choices, which can be quantified by the concept of opportunity cost. (5-3)
12. Economic statements that are subjective in nature and contain feelings or opinions of different individuals. (9)
13. The factor of production that includes goods previously manufactured and are used to make other goods and services. (7)
14. These are finite (limited in supply) but are needed to produce any good or service. (9)

#### Down:

1. A stakeholder group in the economy, ..... are responsible for the creation and supply of goods and services. (9)
2. The factor of production that includes natural resources used in the production of a good or service. (4)
3. The factor of production which is synonymous with human capital. (6)
7. The economic concept which refers to using the minimum input for the maximum output, whilst striving to minimize waste. (10)
9. The state of having limited resources to satisfy unlimited wants. (6)
10. An example of such a statement would be "Provision of free healthcare will increase the public sector expenditure". (8)
11. The provision of a ..... is an economic transaction where an intangible product is traded. (7)

**Worksheet 8**  
**The Economic Problem (3) – Jumbled Key Terms & Definitions**

Unjumbled the following to determine a key word in Economics. Then, match each of these key words with the correct definition given in the table by stating the corresponding letter. [15 marks]

<u>Jumbled Word</u>	<u>Key Term</u>	<u>Definition</u>
1) PRETEENRERUN	.....	.....
2) COMICNOSE	.....	.....
3) ODOGS	.....	.....
4) PAINTSOCIALIZE	.....	.....
5) SCARYTIC	.....	.....
6) AMUNH ACTPAIL	.....	.....
7) UNPITYTROOP SCOT	.....	.....
8) SOFTCAR FO DROPOUTINC	.....	.....
9) QUIETY	.....	.....
10) CYNICFEEFI	.....	.....
11) ANITABUILTISY	.....	.....
12) COINCOME LEWL-BINGE	.....	.....
13) PIVITSOE	.....	.....
14) IVANMETRO	.....	.....
15) COREUSERS	.....	.....

**Definitions table**

<b>(A)</b>	When there is a limit to the resources available to satisfy the unlimited wants of humans.	<b>(I)</b>	Refers to labour resources as a vital factor of production.
<b>(B)</b>	A situation whereby an economy diverts its labour and other resources to focus on the production a limited number of goods or service for greater efficiency.	<b>(J)</b>	An economic concept whereby production within an economy occurs in such a way that the level of waste is minimized and/or eliminated.
<b>(C)</b>	The social science that studies the distribution, consumption and production of goods and services.	<b>(K)</b>	The value of the next best alternative foregone when a decision is made between two choices.
<b>(D)</b>	The economic concept which describes the actions taken by today's generation to support the long-term economic growth and development of future generations.	<b>(L)</b>	An economic concept which refers to the idea of fairness and ensures everyone is treated in the same way irrespective of their conditions and situations.
<b>(E)</b>	Refers to the physical items that satisfy human wants and provides utility for consumers.	<b>(M)</b>	These are inputs and resources needed in the production of a good or service and include labour, capital, land and entrepreneurship.
<b>(F)</b>	The concept in economics that can be quantified by improvements in the quality of life and standards of living.	<b>(N)</b>	A type of statement in economics which contain words such as "should" or "ought to" so has a value judgment.
<b>(G)</b>	An individual who takes financial risks to start and run a new business.	<b>(O)</b>	A type of statement in economics based on statements that can be tested or proven.
<b>(H)</b>	Refers to the factors of production needed to produce goods and services.		

**Worksheet 8**  
**The Economic Problem (3) – Jumbled Key Terms & Definitions**

**Answers**

Unjumbled the following to determine a key word in Economics. Then, match each of these key words with the correct definition given in the table by stating the corresponding letter. [15 marks]

	<u>Jumbled Word</u>	<u>Key term</u>	<u>Definition</u>
1)	PRETEENRERUN	ENTREPRENEUR	(G)
2)	COMICNOSE	ECONOMICS	(C)
3)	ODOGS	GOODS	(E)
4)	PAINTSOCIALIZE	SPECIALIZATION	(B)
5)	SCARYTIC	SCARCITY	(A)
6)	AMUNH ACTPAIL	HUMAN CAPITAL	(I)
7)	UNPITYTROOP SCOT	OPPORTUNITY COST	(K)
8)	SOFTCAR FO DROPOUTINC	FACTORS OF PRODUCTION	(M)
9)	QUIETY	EQUITY	(L)
10)	IFICYFENCE	EFFICIENCY	(J)
11)	ANITABUILTISY	SUSTAINABILITY	(D)
12)	COINCOME LEWL-BINGE	ECONOMIC WELL-BEING	(F)
13)	VIETPOIS	POSITIVE	(O)
14)	IVANMETRO	NORMATIVE	(N)
15)	COREUSERS	RESOURCES	(H)

**Definitions table**

<b>(A)</b>	When there is a limit to the resources available to satisfy the unlimited wants of humans.	<b>(I)</b>	Refers to labour resources as a vital factor of production.
<b>(B)</b>	A situation whereby an economy diverts its labour and other resources to focus on the production a limited number of goods or service for greater efficiency.	<b>(J)</b>	An economic concept whereby production within an economy occurs in such a way that the level of waste is minimized and/or eliminated.
<b>(C)</b>	The social science that studies the distribution, consumption and production of goods and services.	<b>(K)</b>	The value of the next best alternative foregone when a decision is made between two choices.
<b>(D)</b>	The economic concept which describes the actions taken by today's generation to support the long-term economic growth and development of future generations.	<b>(L)</b>	An economic concept which refers to the idea of fairness and ensures everyone is treated in the same way, irrespective of their conditions and situations.
<b>(E)</b>	Refers to the physical items that satisfy human wants and provides utility for consumers.	<b>(M)</b>	The inputs and resources needed in the production of a good or service, namely labour, capital, land and entrepreneurship.
<b>(F)</b>	The concept in economics that can be quantified by improvements in the quality of life and standards of living.	<b>(N)</b>	A type of statement in economics which contain words such as "should" or "ought to" so has a value judgment.
<b>(G)</b>	An individual who takes financial risks to start and run a new business.	<b>(O)</b>	A type of statement in economics based on statements that can be tested or proven.
<b>(H)</b>	Refers to the factors of production needed to produce goods and services.		

**Worksheet 9**  
**Production Possibility Curve (1)**

1) Explain how the division of labour and specialization may affect a country's production possibility curve (PPC). *[4 marks]*

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2) With reference to the PPC model, explain the difference between a movement from a point inside the production possibility curve (PPC) to a point on the PPC and a movement along the PPC. *[4 marks]*

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3) Explain any **two** assumptions of the PPC model. *[4 marks]*

**Assumption 1:** .....

.....

.....

**Assumption 2:** .....

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.....

4) State whether each of the following statements is true or false. *[6 marks]*

- (a) Resource specialization is a reason for the negative slope of the PPC. ....
- (b) Floods that destroy resources in the economy will lead to an outward shift in the country's PPC. ....
- (c) Any point inside the PPC represents an under-utilization of the economy's scarce resources. ....
- (d) A job guarantee scheme will lead to a rightward shift of the PPC. ....
- (e) Factor mobility changes the position of the PPC. ....
- (f) Large scale unemployment due to infectious pandemics shift a country's PPC leftwards. ....

## Worksheet 9 Production Possibility Curve (1)

### Answers

- 1) Explain how the division of labour and specialization may affect a country's production possibility curve (PPC). [4 marks]

Division of labour in the production process refers to dividing the production process into smaller functions or units which are then allocated among different workers (labourers). The repetitive nature of the specific activity leads to specialization of the various factors of production (labour, land or capital). Due to improved coordination, this leads to an increase in economic efficiency and production capacity, which shifts the country's PPC outward (rightward).

- 2) With reference to the PPC model, explain the difference between a movement from a point inside the production possibility curve (PPC) to a point on the PPC and a movement along the PPC. [4 marks]

The PPC model shows all the possible combinations of two goods that an economy can produce with its given resources and the current state of technology. A movement from a point inside the PPC to a point on the PPC indicates improved efficiency in the use of factor resources in order to obtain a greater combination of production possibilities.

By contrast, a movement along the PPC represents an increase in the production of Good X but necessitates giving up the production of Good Y. This illustrates the concept of opportunity cost, where the choice to increase the production of Good X will lead to an opportunity cost arising from the value of the best alternative (i.e. the production of the Good Y), and vice versa.

- 3) Explain any **two** assumptions of the PPC model. [4 marks]

One assumption of the PPC model is that it assumes all the resources within the economy are fully employed in order to achieve its maximum potential output. However, when there is unemployment or unused resources, the economy will produce below its potential output level.

A second assumption of the PPC model is that it assumes all resources are used efficiently, implying that economic resources are used without any wastage. The assumption is that inefficiencies are minimized or eliminated in order to achieve greater productivity.

- 4) State whether each of the following statements is true or false. [6 marks]

- (a) Resource specialization is a reason for the negative slope of the PPC. False  
This is due to the opportunity cost of resource use for the production of different combinations of goods and services
- (b) Floods that destroy resources in the economy will lead to an outward shift in the country's PPC. False  
Floods that destroy a country's resources will cause an inward shift of its PPC
- (c) Any point inside the PPC represents an under-utilization of the economy's scarce resources. True
- (d) A job guarantee scheme will lead to a rightward shift of the PPC. False  
This suggests there is unemployment in the economy, so can only help to move the economy towards its PPC, rather than shifting the PPC outwards
- (e) Factor mobility changes the position of the PPC. True
- (f) Large scale unemployment due to infectious pandemics shift a country's PPC leftwards. False  
Unemployment does not cause a shift in the PPC, but represents the under-utilization of an economy's existing resources

**Worksheet 10**  
**Production Possibility Curve (2)**

1) Referring to the PPC diagram shown below on the right, outline what points X, Y and A represent. [3 marks]

**Point X:** .....

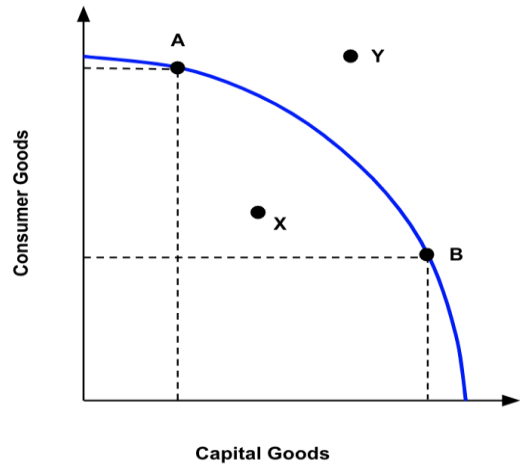
.....

**Point Y:** .....

.....

**Point A:** .....

.....



2) A recent trade war between America and China meant that many European nations looked to India as a trading partner. Using an appropriate diagram, explain the likely effect of this on India's PPC. [4 marks]

**Explanation:** .....

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3) Explain why the PPC is downward sloping and drawn concave to the origin. [4 marks]

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4) Complete the following sentences by underlining the correct answer from the two options. [2 marks]

(a) An economy that operates on its PPC is: under-utilizing all of its resources / fully utilizing all of its productive resources.

(b) An example of a cause of an inward shift of a country's PPC is: workers get employed to complete a construction project / a typhoon destroys significant resources in the economy.

## Worksheet 10 Production Possibility Curve (2)

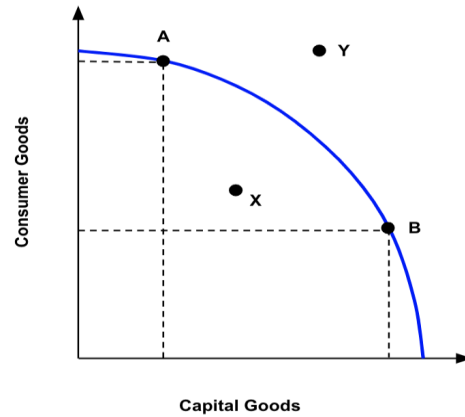
### Answers

- 1) Referring to the PPC diagram shown below on the right, outline what points X, Y and A represent. [3 marks]

**Point X:** This indicates an inefficient utilization or underemployment of the economy's scarce resources.

**Point Y:** This indicates a production combination that is currently unattainable as it is beyond the economy's existing PPC.

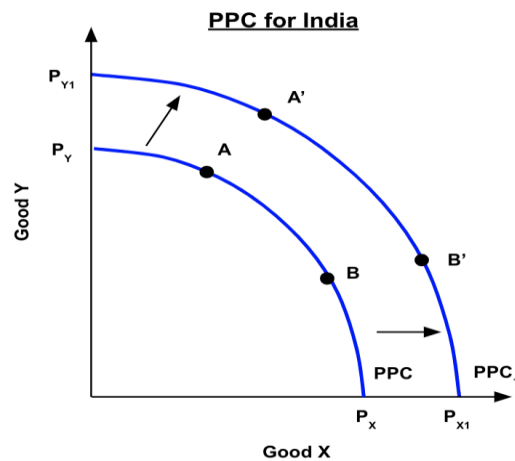
**Point A:** This indicates a production combination that is attainable where the resources are being utilized efficiently as it is on the PPC, in favour of consumer goods over capital goods.



- 2) A recent trade war between America and China meant that many European nations looked to India as a trading partner. Using an appropriate diagram, explain the likely effect of this on India's PPC. [4 marks]

#### Explanation:

The trade war between America and China would increase the demand for Indian exports and enhanced trading relations, ceteris paribus. This would help to incentivize Indian producers to operate more efficiently, employ more advanced technology, and/or increase employment and investments. These factors would lead to an outward shift of India's PPC from PPC to PPC<sub>1</sub>. This indicates economic growth for the Indian economy as it becomes possible for India to produce more of both Good X and Good Y, as shown by the shift from point A to A' or point B to B'.



- 3) Explain why the PPC is downward sloping and drawn concave to the origin. [4 marks]

The downward slope of the PPC means that if a country wants to produce more of one good or service then it will have to produce less of the other product due to the concept of scarcity (i.e. limited resources).

At the same time, the PPC is drawn concave to the origin due to the notion of increasing marginal opportunity costs. To increase the production of an additional unit of Good X, more units of Good Y will need to be sacrificed. This implies that the slope of the PPC (shown by the gradient of the tangent at any point on the PPC) increases, i.e. becomes steeper. Hence, this is illustrated as a curve drawn concave to the origin.

- 4) Complete the following sentences by underlining the correct answer from the two options.

[2 marks]

- (a) An economy that operates on its PPC is: under-utilizing all of its resources / fully utilizing all of its productive resources.
- (b) An example of a cause of an inward shift of a country's PPC is: workers get employed to complete a construction project / a typhoon destroys significant resources in the economy.



**Worksheet 11**  
**Circular Flow of Income Model (1)**

1) Explain the circular flow of income model in a closed economy. *[4 marks]*

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2) In a simple circular flow model of the macroeconomy, identify the **two** economic agents and **two** markets. *[4 marks]*

.....

.....

3) With reference to the circular flow model, outline the relationship between the sectors and markets identified in Question 2. *[2 marks]*

.....

.....

4) With reference to the circular flow model, state the rewards for each of the economic agents identified in Question 2. *[2 marks]*

.....

.....

5) Describe the interdependence between these two economic agents. *[2 marks]*

.....

.....

6) Describe the flow of money between the two aforementioned economic agents. *[4 marks]*

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7) Explain how the simple circular flow of income model can guide the measurement of the overall level of economic activity in an economy. *[4 marks]*

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**Worksheet 11**  
**Circular Flow of Income Model (1)**

**Answers**

- 1) Explain the circular flow of income model in a closed economy. *[4 marks]*

A closed economy is one in which there are no economic relations with other countries (international trade). This means the economy is entirely self-sufficient. In such an economy, the flows of goods and services, and income and expenditure occur between households and firms over a period of time. The three aspects of the model are: the production of goods and services, the distribution of income among the owners of factor inputs, and the expenditure for consumption and investment.

- 2) In a simple circular flow model of the macroeconomy, identify the **two** economic agents and **two** markets. *[4 marks]*

A simple circular flow model of the macroeconomy includes two sectors: businesses (firms) and households. They are connected in the model by two markets: product markets (for goods and services) and resource markets (for factors of production).

- 3) With reference to the circular flow model, outline the relationship between the sectors and markets identified in Question 2. *[2 marks]*

Households own the factors of production (land, labour, capital and entrepreneurship). Firms will buy/hire these factors of production through the various resource markets, employing these to assist in the production of goods and services. Once firms produce the final goods and services for sale, they are sold to households through product markets.

- 4) With reference to the circular flow model, state the rewards for each of the economic agents identified in Question 2. *[2 marks]*

Households: Land (rent), Labour (wages), Capital (interest), and Entrepreneurship (profits)

Firms: Sales of final goods and services (revenues)

- 5) Describe the interdependence between these two economic agents. *[2 marks]*

Households and firms are interdependent because households own the factors of production that firms need to engage in the production of goods and services. The output created by firms is then sold to households for consumption purposes.

- 6) Describe the flow of money between the two aforementioned economic agents. *[4 marks]*

Households are rewarded by firms for the factors of production used in the resource market, thereby earning various form of money or income. For example, labour as a factor resource will earn wages, the use of land will earn rent, capital will generate interest and entrepreneurship will earn profits. Collectively, these rewards constitute the money flow from firms to households. In the product market, households purchase the final goods and services provided by firms, so this becomes an outflow of money from households to firms. In other words, the inflow of money for firms is their revenues from the sale of final goods and services sold to households.

- 7) Explain how the simple circular flow of income model can guide the measurement of the overall level of economic activity in an economy. *[4 marks]*

The simple circular flow of income model reveals several different ways in which an economy can measure the level of economic activity. For example, from the household perspective, an economy can look at either the amount earned by households (through the sale of factors of production in the resource markets) or the level of household expenditures (from the purchases made in the product markets).

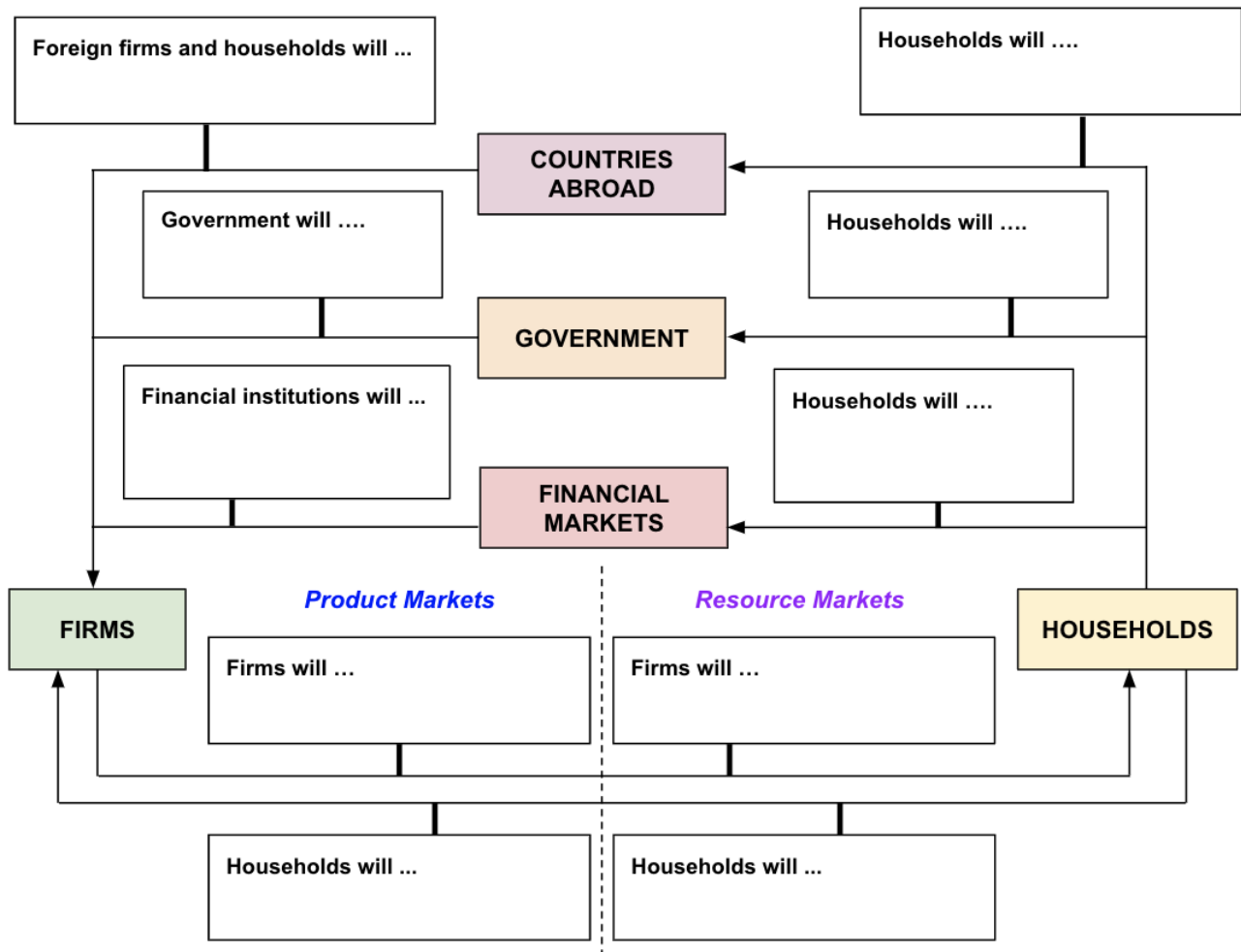
From the firm's perspective, the economy can look at the level of revenues earned from the sale of final goods and services (from product markets) or the payments made to workers and shareholders (in resource markets).

**Worksheet 12**  
**Circular Flow of Income Model (2)**

1) Use the terms / phrases in the box below to complete the circular flow of income model diagram. [10 marks]

Provide factors of production	Pay taxes	Deposit money for savings
Spend on imported goods and services	Make factor payments	Make final consumption expenditures
Provide loans for investments and expansion	Spend on exported goods and services	Spend money on education, healthcare, and national defense
Sell final goods and services		

**Circular Flow of Income Model**  
**(with leakages & injections)**



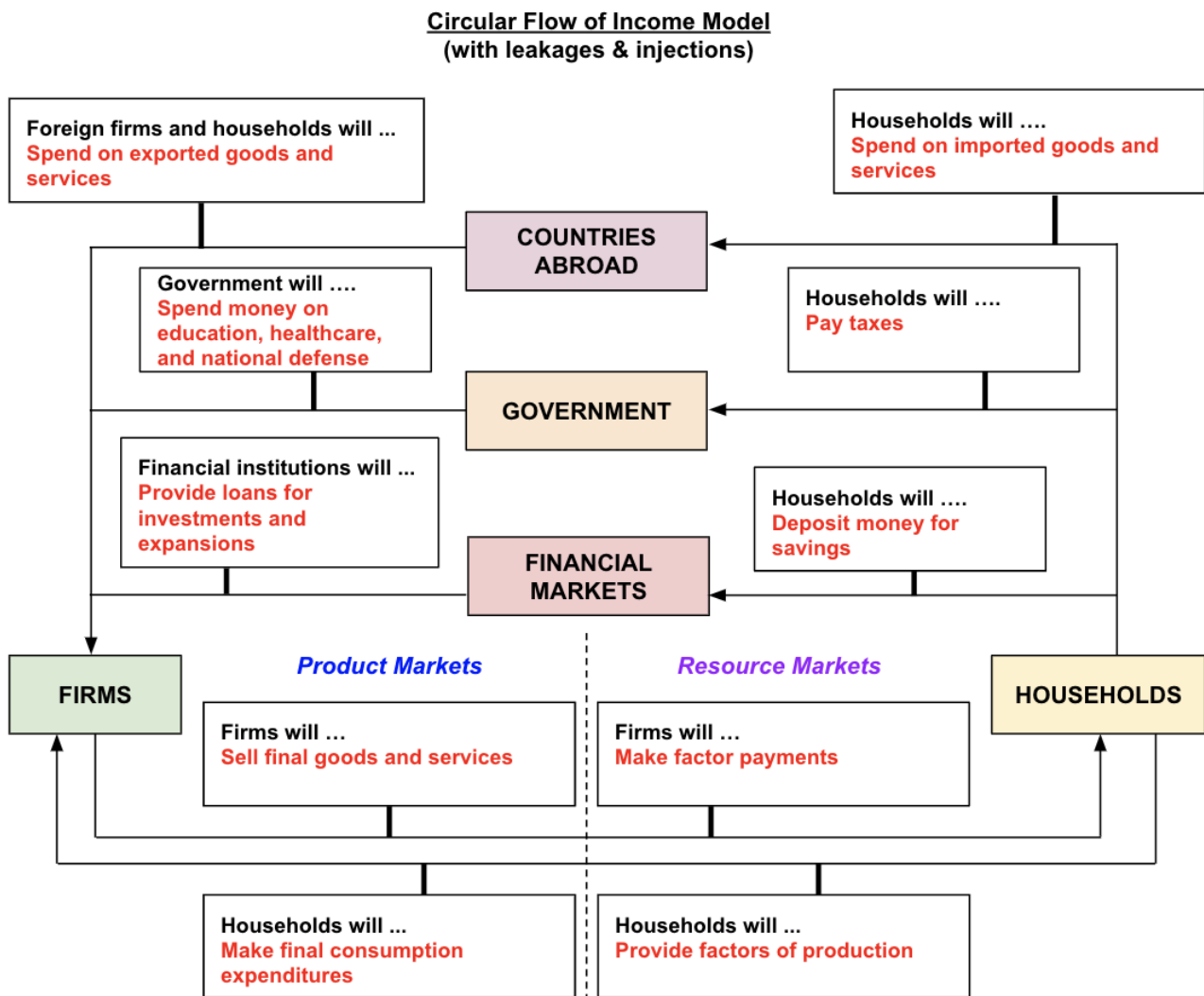
2) Using your completed circular flow of income model diagram above, answer the following questions. [5 marks]

- Identify the type of economy this diagram represents. ....
- Identify the leakages in the diagram. ....
- Identify the injections in the diagram. ....
- State the impact on the output level if leakages exceed the injections. ....
- State one method used to measure the value of national income in an economy. ....

**Worksheet 12**  
**Circular Flow of Income Model (2)**

**Answers**

- 1) Use the terms / phrases in the box below to complete the circular flow of income model diagram. [10 marks]



- 2) Using your completed circular flow of income model diagram above, answer the following questions. [5 marks]

- (a) Identify the type of economy this diagram represents. A closed economy
- (b) Identify the leakages in the diagram. 
  - Tax payment (to government)
  - Savings (deposits to banks)
- (c) Identify the injections in the diagram. 
  - Government spending
  - Investments by firms
- (d) State the impact on the output level if leakages exceed the injections. The output level will fall
- (e) State one method used to measure the value of national income in an economy. 
  - The output approach
  - The income approach
  - The expenditure approach

**Worksheet 13**  
**Circular Flow of Income Model (3) – Quantitative Skills**

- 1) Using relevant examples, explain the meaning of injections and leakages in the circular flow of income model. [4 marks]

.....

.....

.....

.....

- 2) Refer to the data in the table below for an open economy to answer the questions that follow.

Items	(\$ millions)
Government consumption expenditure	1,000
Subsidies for domestic producers	200
Exports	300
Imports	100
Domestic capital formation	250
Foreign direct investment (FDI)	250
National output (real GDP)	3,000
Domestic savings	1,200
Income tax paid	300
Excise duty received by the government	250
Factor incomes from abroad	500
Payments made to non-residents	300
Private consumption expenditure	2,000
Total rent paid in the economy	150
Investments by multinationals (MNCs)	350

- (a) Calculate the total value of leakages from the economy. [2 marks]

.....

- (b) Calculate the total value of injections into the economy. [2 marks]

.....

- (c) Calculate the value of net injections in the economy. [2 marks]

.....

- (d) Calculate the national output based on the net injections in the economy. [2 marks]

.....

- 3) State the effect of each of the following factors on the real GDP of a country. [4 marks]

- (a) A decline in tax rates. ....
- (b) Selling of government bonds in the open market. ....
- (c) Speculative purchases of stocks (shares) in the domestic market. ....
- (d) Economic stimulus package during a major pandemic. ....

**Worksheet 13**  
**Circular Flow of Income Model (3) – Quantitative Skills**

**Answers**

- 1) Using relevant examples, explain the meaning of injections and leakages in the circular flow of income model. [4 marks]

**Leakages:** These refer to the withdrawals from the circular flow of income of an economy. They consist of any part of income generated in the economy that does not circulate or flow back into the economy. For example, savings represent the income which household do not spend (on buying goods and/or services in the economy). Another example is import expenditure, which refers to the spending on goods and services from abroad (i.e. money flows out of the economy).

**Injections:** These refer to the additions to the circular flow of income which does not arise from the current income or expenditure of households and/or firms. An example is export receipts, which are the incomes earned by domestic firms on the sale of goods and services sold to foreign buyers (so money flows into the domestic economy). Another example is government spending, which represents an injection into the circular flow as public funds are used to provide healthcare, education and/or national defence which shows money flowing back into the economy.

- 2) Refer to the data in the table below for an open economy to answer the questions that follow.

- (a) Calculate the value of total leakages from the economy. [2 marks]

- Total Leakages from the economy = Imports + Domestic savings + Income tax paid + Excise duty received by the government + Payments made to non-residents
- = \$100m + \$1,200m + \$300m + \$250m + \$300m
- = \$2,150 million

- (b) Calculate the value of total injections into the economy. [2 marks]

- Total injections into the economy = Government consumption expenditure + Subsidies to domestic producers + Exports + Domestic capital formation + FDI + Factor incomes from abroad + Investments by MNCs
- = \$1,000m + \$200m + \$300m + \$250m + \$250m + \$500m + \$350m
- = \$2,850 million

- (c) Calculate the value of net injections in the economy. [2 marks]

- Net injections = Total injections – Total leakages
- = \$2,850m – \$2,150m = \$700 million

- (d) Calculate the national output based on the net injections in the economy. [2 marks]

- National output due to net injections = National output + Net injections
- = \$3,000m + \$700m = \$3700 million

- 3) State the effect of each of the following factors on the real GDP of a country. [4 marks]

- |  |   |
|--|---|
| (a) A decline in tax rates.  | <b>Expansion</b> – As consumption expenditure will increase due to the tax cuts, this will also increase real GDP.  |
| (b) Selling of government bonds in the open market.                  | <b>Contraction</b> – As more funds will be withdrawn from the economy to buy government bonds (instead of being used for consumption expenditure), this will decrease real GDP. |
| (c) Speculative purchases of stocks (shares) in the domestic market. | <b>Contraction</b> – As more funds will be withdrawn from the economy to buy stocks/shares, this will decrease real GDP as consumption spending falls.                          |
| (d) Economic stimulus package during a major pandemic.               | <b>Expansion</b> – As more funds will be available for household consumption and business investment expenditure, this will increase real GDP.                                  |

**Worksheet 14**  
**Unit 1.1 – Revision Questions (1)**

1) Indicate whether the following statements are true or false and provide a brief reason for your answer. *[6 marks]*

(a) The central economic questions would not exist without the basic economic problem.

.....

(b) Scarcity of resources arise mainly in poor (low-income) countries.

.....

(c) Labour is a homogenous (identical) resource.

.....

2) Describe one way in which the problem of scarcity can be tackled. *[2 marks]*

.....

.....

3) Use examples to distinguish between economic and free (non-economic) goods. *[4 marks]*

.....

.....

.....

.....

4) Fill in the blanks by completing the sentences with the phrases in the box below. *[6 marks]*

Involves an opportunity cost	The question of “what” to produce
The next best alternative foregone	Building and testing models
The question of “how” to produce	Making choices given there are scarce resources

(a) Academic economists make progress by .....

(b) As a result of scarcity, every choice .....

(c) Economics can be defined as the social science that explains .....

.....

(d) The ultimate cost of any choice is .....

(e) The decision on whether or not the government should allocate its resources to build more schools or to build more roads is .....

(f) The decision over the production method is of a good or service is related to .....

.....

**Worksheet 14**  
**Unit 1.1 – Revision Questions (1)**

**Answers**

1) Indicate whether the following statements are true or false and provide a brief reason for your answer. [6 marks]

(a) The central economic questions would not exist without the basic economic problem.

**TRUE** – Due to the economic problem of scarcity, it is not possible to satisfy the unlimited wants of everyone in an economy; thus choices will need to be made to address the central economic questions of what, how, and for whom production should take place.

(b) Scarcity of resources arise mainly in poor (low-income) countries.

**FALSE** – Both rich (high-income) and poor (low-income) countries face the issue of scarcity as this is a universal phenomenon and a central problem in all economies.

(c) Labour is a homogenous (identical) resource.

**FALSE** – Labour is a heterogeneous resource since people (labour) possess different skills, qualifications, experiences, and abilities. This results in different productivity levels as their differences in skills and abilities allow them to produce different quantities and quality of output.

2) Describe one way in which the problem of scarcity can be tackled. [2 marks]

Scarcity is one of the key concepts in economics. It refers to the limited resources in an economy, thus implying the need to allocate resources effectively. The issue of scarcity can be tackled by valuing a scarce product at a higher price, which tends to discourage demand and encourages firms to develop alternatives rather than depleting the scarce resource.

3) Use examples to distinguish between economic and free (non-economic) goods. [4 marks]

Economic goods are products that are scarce, either due to them being naturally scarce or being produced by scarce resources. Examples include diamonds, petrol, and electricity, which command a price and are scarce in relation to human's unlimited wants.

By contrast, free (non-economic) goods are not scarce and do not have a limit in terms of the supply of the resource. An example includes the air (oxygen) we breathe each and every day, as there is an abundance of supply and which is available free of any cost.

4) Fill in the blanks by completing the sentences with the phrases in the box below. [6 marks]

(a) Academic economists make progress by **building and testing models**.

(b) As a result of scarcity, every choice **involves an opportunity cost**.

(c) Economics can be defined as the social science that explains **making choices given there are scarce resources**.

(d) The ultimate cost of any choice is **the next best alternative foregone**.

(e) The decision on whether or not the government should allocate its resources to build more schools or to build more roads is **the question of "what" to produce**.

(f) The decision over the production method is of a good or service is related to **the question of "how" to produce**.



**Worksheet 15**  
**Unit 1.2 – Revision Questions (2)**

1) Explain whether the following statement is true or false: “Economics is both normative and positive in nature”. *[4 marks]*

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2) For each of the following situations, state the effect on an economy’s production possibility curve (PPC). *[5 marks]*

- (a) Opportunity cost is constant. .....
- (b) Resources are not fully employed and not efficiently used. .....
- (c) A monsoon in Thailand leads to rivers overflowing and causing major floods. .....
- (d) Improvements in the quantity and quality of the factors of production in an economy. .....
- (e) A sacrifice needs to be made to increase production of one good over another good due to scarcity. .....

3) State whether the following statements are true or false and provide a brief explanation for each. *[3 marks]*

- (a) The theory of distribution in economics studies the problem of “how to produce”.  
.....
- (b) If the PPC shifts to the right, the new PPC will be parallel to the original.  
.....
- (c) An economy addresses the needs of all its residents in the economy.  
.....

4) Explain whether each of the statements below is a subject matter of microeconomics or macroeconomics.

(a) Rent ceiling (a limit on rental charges) impacts the supply of apartments. *[2 marks]*

.....

.....

(b) A firm decides to increase hiring of labour to increase its production. *[2 marks]*

.....

.....

**Worksheet 15**  
**Unit 1.2 – Revision Questions (2)**

**Answers**

- 1) Explain whether the following statement is true or false: “Economics is both normative and positive in nature”. [4 marks]

This statement is **true** - Economics is both normative and positive in nature. Positive economics can therefore be defined as “what is” in economics whilst normative economics states “what ought to be”. In other words, positive economics states an economic problem that is supported by facts and proven through hypothesis and models whilst normative economics proposes the value-based solutions to the issue.

**Positive economics** is based on justifiable facts and involves formulating hypothesis to describe the economic events in our world which can be generalised through economic models and theories. **Normative economics** builds on the findings and justifiable facts proven through positive economics and offers a value-based solution to economic problems and issues, which are based on opinions and value judgements. For example, what should be the best macroeconomic policy to tackle the issue of income inequality in an economy?

- 2) For each of the following situations, state the effect on an economy’s production possibility curve (PPC). [5 marks]

- |  |   |
|--|---|
| (a) Opportunity cost is constant.  | The PPC will be linear                                    |
| (b) Resources are not fully employed and not efficiently used.   | The production combination will be under (inside) the PPC |
| (c) A monsoon in Thailand leads to rivers overflowing and causing major floods.                        | The PPC will shift inward (leftward)                      |
| (d) Improvements in the quantity and quality of the factors of production in an economy.               | The PPC will shift outward (rightward)                    |
| (e) A sacrifice needs to be made to increase production of one good over another good due to scarcity. | A movement along the PPC                                  |

- 3) State whether the following statements are true or false and provide a brief explanation for each. [3 marks]

- (a) The theory of distribution in economics studies the problem of “how to produce”.

**FALSE** – This statement refers to the economic problem of “for whom to produce”.

- (b) If the PPC shifts to the right, the new PPC will be parallel to the original.

**FALSE** – The new PPC does not need to be parallel to the original PPC as it may rotate/pivot from either of the axes.

- (c) An economy addresses the needs of all its residents in the economy.

**FALSE** – An economy strives to meet the needs of all residents with the scarce resources it has but this does not mean they are able to do so. For example, more economically developed countries (MEDCs) are able to utilize their scarce resources and use better technologies and/or skilled labour for more effective and productive production in order to satisfy the needs of its residents – but not necessarily all. By contrast, low-income countries with higher unemployment rate and lower investments (in technologies and infrastructure) are equally unable to meet all the needs of their residents.

- 4) Explain whether each of the statements below is a subject matter of microeconomics or macroeconomics.

- (a) Rent ceiling (a limit on rental charges) impacts the supply of apartments. [2 marks]

This is a microeconomics statement. Rent ceilings lead to the rental rates set below the equilibrium rent, creating a shortage in the rental housing market. This could lead to the emergence of an unofficial market whilst the supply of housing decreases and the demand for housing rises.

- (b) A firm decides to increase hiring of labour to increase its production. [2 marks]

This is a microeconomics statement as microeconomics deals with the study of individual households and firms, and their behaviour in decision-making and the allocation of resources.

**Worksheet 16**  
**Key Terms in Economic Models**

Match each of the following definitions or statements to the terms in the box below. [16 marks]

Empirical evidence	Theory	Laissez faire	Logic
Economic policy	Utility theory	Laws	Test hypothesis
Positive statements	Classical economics	Refutation	Ceteris paribus
Behavioural economics	Normative statements	Hypothesis	Economic models

Definition / Statement		Term
1)	A method of reasoning in which a series of statements are derived from the preceding true statements.	
2)	Refers to real world information, data and observations acquired through experience.	
3)	Examination of collected data on certain variables as presented in a hypothesis in order to check its validity.	
4)	A general explanation of multiple events based on many tested hypotheses and evidence.	
5)	These demonstrate relationships between variables, often diagrammatically or through mathematical equations.	
6)	Simple expressions describing an event that forms the basis of complex theories.	
7)	The idea of a possibility to subject a theory or a hypothesis to put to empirical testing in order to prove its validity.	
8)	Government actions that attempt to find solutions to economic issues and problems.	
9)	Claims that are based on facts, real data and information.	
10)	A belief or proposed supposition made on the basis of limited evidence as a starting point for further investigation.	
11)	Assumption made when examining the effect that one economic variable has on another, provided that all other variables remain the same (constant).	
12)	Contemporary branch of economics that studies the decisions made by individuals and firms and how they are influenced by psychological, emotional and social factors.	
13)	The policy of minimum governmental interference in the economic affairs of individuals and society.	
14)	The economic theory that attempts to explain the behaviour of individuals based on the premise that people can rank their choices depending upon their preferences.	
15)	The dominant school of thought for economics in the 18th and 19th centuries that helped countries adopt self-regulating democracies and capitalistic markets.	
16)	Economic claims or statements made when acting on policy advisers instead of scientists for prescriptive judgments toward economic development, investment projects, statements, and scenarios.	

**Worksheet 16**  
**Key Terms in Economic Models**

**Answers**

Match each of the following definitions or statements to the terms in the box below. [16 marks]

Empirical evidence	Theory	Laissez faire	Logic
Economic policy	Utility theory	Laws	Test hypothesis
Positive statements	Classical economics	Refutation	Ceteris paribus
Behavioural economics	Normative statements	Hypothesis	Economic models

Definition / Statement		Term
1)	A method of reasoning in which a series of statements are derived from the preceding true statements.	Logic
2)	Refers to real world information, data and observations acquired through experience.	Empirical evidence
3)	Examination of collected data on certain variables as presented in a hypothesis in order to check its validity.	Test hypothesis
4)	A general explanation of multiple events based on many tested hypotheses and evidence.	Theory
5)	These demonstrate relationships between variables, often diagrammatically or through mathematical equations.	Economic models
6)	Simple expressions describing an event that forms the basis of complex theories.	Laws
7)	The idea of a possibility to subject a theory or a hypothesis to put to empirical testing in order to prove its validity.	Refutation
8)	Government actions that attempt to find solutions to economic issues and problems.	Economic policy
9)	Claims that are based on facts, real data and information.	Positive statements
10)	A belief or proposed supposition made on the basis of limited evidence as a starting point for further investigation.	Hypothesis
11)	Assumption made when examining the effect that one economic variable has on another, provided that all other variables remain the same (constant).	Ceteris paribus
12)	Contemporary branch of economics that studies the decisions made by individuals and firms and how they are influenced by psychological, emotional and social factors.	Behavioural economics
13)	The policy of minimum governmental interference in the economic affairs of individuals and society.	Laissez faire
14)	The economic theory that attempts to explain the behaviour of individuals based on the premise that people can rank their choices depending upon their preferences.	Utility theory
15)	The dominant school of thought for economics in the 18th and 19th centuries that helped countries adopt self-regulating democracies and capitalistic markets.	Classical economics
16)	Economic claims or statements made when acting on policy advisers instead of scientists for prescriptive judgments toward economic development, investment projects, statements, and scenarios.	Normative statements

**Worksheet 17**  
**Positive and normative economic statements (1)**

1) Explain the difference between positive and normative economics. [4 marks]

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2) Complete the following questions by using the terms from the box below. [12 marks]

Description	Theories	Relationships	Facts	Reasoning	Opinions
Cause	Value judgment	Equity	Empirical	Effect	Explanation

(a) Positive economics is a branch of Economics that focuses mainly on the ..... and ..... of economic events and phenomena. It is based on ....., ..... and ..... to establish behavioural ..... This includes developing and testing economic .....

(b) Normative economics is a branch of economics that expresses ..... about economic issues such as ..... (perceived fairness) in the economy. These views and normative judgments are based on the ..... of policymakers, rather than on factual statements and ..... evidence.

(c) Positive and normative economics are the two major branches of economic thinking and .....

3) State whether each of the following statements is a positive or normative statement and why. [10 marks]

(a) Healthcare provided by the government increases public spending, which is a burden on public sector finances.  
Positive or Normative: .....

(b) The government should try to reduce inequality and unemployment in the economy.  
Positive / Normative: .....

(c) Mixed economies may be the best form of economic system.  
Positive / Normative: .....

(d) Most monopolies are inefficient producers as they charge higher prices and under-produce.  
Positive / Normative: .....

(e) Pollution is the most serious economic problem facing an economy.  
Positive / Normative: .....

**Worksheet 17**  
**Positive and normative economic statements (1)**

**Answers**

1) Explain the difference between positive and normative economics. [4 marks]

Possible answers include:

- Perspective: Normative economics is subjective in nature whereas positive economics is objective in nature.
- Purpose: Positive economics describes cause and effect relationships through describing, explaining, and predicting economic events using theories, hypothesis, and models. By contrast, normative economics is often prominent in making / using economic policies based on the beliefs and value judgments of policymakers.
- Reliability: Positive economics is empirical and examines actual economic issues and problems that can be verified and/or validated by facts, figures, and evidence. By contrast, normative economics provides options that rely on personal opinions, preferences and experiences that cannot be validated by facts, figures, or available evidence.

2) Complete the following questions by using the terms from the box below. [12 marks]

- (a) Positive economics is a branch of Economics that focuses mainly on the description and explanation of economic events and phenomena. It is based on facts, cause and effect to establish behavioural relationships. This includes developing and testing economic theories.
- (b) Normative economics is a branch of economics that expresses value judgments about economic issues such as equity (perceived fairness) in the economy. These views and normative judgments are based on the opinions of policymakers, rather than on factual statements and empirical evidence.
- (c) Positive and normative economics are the two major branches of economic thinking and reasoning.

3) State whether each of the following statements is a positive or normative statement and why. [10 marks]

- (a) Healthcare provided by the government increases public spending, which is a burden on public sector finances.

**Positive / Normative: This can be verified by official records of spending by the government.**

- (b) The government should try to reduce inequality and unemployment in the economy.

**Positive / Normative: This statement is an opinion and can be disputed or refuted.**

- (c) Mixed economies may be the best form of economic system.

**Positive / Normative: This statement is based on opinions and cannot be clearly proven by facts and figures or empirical studies. The word 'best' is subjective in this context.**

- (d) Most monopolies are inefficient producers as they charge higher prices and under-produce.

**Positive / Normative: Evidence can be gathered to show/prove/determine whether monopolies in the economy under-produce and charge higher prices (especially privately run monopolies).**

- (e) Pollution is the most serious economic problem facing an economy.

**Positive / Normative: Although not everyone may agree with this statement, it can be verified by the facts, data and evidence that are available to the government and other research organizations.**

**Worksheet 18**  
**Positive and Normative Statements (2)**

- 1) For each statement below, indicate whether it is a positive or normative statement. Using the information/context from the statement, write a contrasting statement on the line provided. An example is shown below. [10 marks]

**Example:**  
Original statement: "Demand falls when price rises".  
Positive statement / Normative statement  
Contrasting statement: *The government should take steps to control rising prices.* (Normative)

- (a) Workers' wages should be more than \$10 per hour to compensate for the cost of living.

Positive statement / Normative statement

.....

- (b) The government should lower the price of houses in the economy to make accommodation more affordable.

Positive statement / Normative statement

.....

- (c) High taxes levied on cigarettes help to encourage people to smoke less.

Positive statement / Normative statement

.....

- (d) The export of Indian mangoes has created a shortage during the mango season in India.

Positive statement / Normative statement

.....

- (e) Tax cuts help many citizens, but limited government budgets can make this option unfeasible.

Positive statement / Normative statement

.....

- 2) Using an arrow (or line), match each of the statements in the left-hand column with the correct statement listed in the right-hand column below. [5 marks]

- |   |   |   |
|---|---|---|
| (a) One should eat less sugar                               | • | • Income inequality exists in all countries |
| (b) Normative statement                                     | • | • Positive statement                        |
| (c) An increase in unemployment leads to higher crime rates | • | • Normative statement                       |
| (d) The real GDP of Country X is \$30,000 per capita        | • | • Food is a basic human right               |
| (e) Positive statement                                      | • | • Higher education should be free           |

**Worksheet 18**  
**Positive and Normative Statements (2)**

**Answers**

- 1) For each statement below, indicate whether it is a positive or normative statement. Using the information/context from the statement, write a contrasting statement on the line provided. An example is shown below. [10 marks]

**Example:**

Original statement: "Demand falls when price rises".

Positive statement / Normative statement

Contrasting statement: *The government should take steps to control rising prices.* (Normative)

- (a) Workers' wages should be more than \$10 per hour to compensate for the cost of living.

Positive statement / **Normative statement**

**Workers' wages are \$5 per hour. (Positive statement)**

- (b) The government should lower the price of houses in the economy to make accommodation more affordable.

Positive statement / **Normative statement**

**More people will tend to buy houses if property prices fall. (Positive statement)**

- (c) High taxes levied on cigarettes help to encourage people to smoke less.

**Positive statement** / Normative statement

**Smoking should be discouraged. (Normative statement)**

- (d) The export of Indian mangoes has created a shortage during the mango season in India.

**Positive statement** / Normative statement

**Export of mangoes from India ought to be banned to prevent a domestic shortage. (Normative statement)**

- (e) Tax cuts help many citizens, but limited government budgets can make this option unfeasible.

**Positive statement** / Normative statement

**We should reduce taxes to generate greater household spending power. (Normative statement)**

- 2) Using an arrow (or line), match each of the statements in the left-hand column with the correct statement listed in the right-hand column below. [5 marks]

- |   |   |   |   |
|---|---|---|---|
| (a) One should eat less sugar                               | • | • | Income inequality exists in all countries |
| (b) Normative statement                                     | • | • | Positive statement                        |
| (c) An increase in unemployment leads to higher crime rates | • | • | Normative statement                       |
| (d) The real GDP of Country X is \$30,000 per capita        | • | • | Food is a basic human right               |
| (e) Positive statement                                      | • | • | Higher education should be free           |
-



**Worksheet 19**  
**Economics Methodology (1) – The Use of Logic**

1) Positive economics is based on empirical evidence, logic, and reasoning. For each set of statements below, construct a series of three logical statements following the first statement and connecting with the last statement. [9 marks]

**Set of Statements 1:**

- (a) People find apples to be a highly nutritious fruit.
- (b) .....
- (c) .....
- (d) .....
- (e) Therefore, the equilibrium price of apples increases.

**Set of Statements 2:**

- (a) There is an increase in the number of cardiac patients (with heart or blood problems).
- (b) .....
- (c) .....
- (d) .....
- (e) The government imposes a price ceiling in the market.

**Set of Statements 3:**

- (a) The level of consumer confidence regarding political stability in an economy increases.
- (b) .....
- (c) .....
- (d) .....
- (e) Inflation increases in the economy.

2) Read the extract below and explain the logic behind the government's value judgment. [4 marks]

**Higher fuel taxes, fewer subsidies are good policy**

The Indian central government raised its excise duty on diesel and petrol in March and May 2020. Higher taxes could yield up to 1% of GDP, which could prove vital during the recession caused by the global COVID19 pandemic. Petrol in India is far cheaper than in Europe or Japan, though more expensive than in the USA where fuel taxes are low. However, India is far more polluted. It has been argued that fuel taxes need to be raised even further to curb consumption and to create incentives for households and firms to switch to electric alternatives. This will take time to develop and implement, but technological change and progress is already spreading fast with electric rickshaws.

Adapted from: <https://timesofindia.indiatimes.com/blogs/Swaminomics/higher-fuel-taxes-fewer-subsidies-are-good-policy/>

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**Worksheet 19**  
**Economics Methodology (1) – The Use of Logic**

**Answer**

- 1) Positive economics is based on empirical evidence, logic, and reasoning. For each set of statements below, construct a series of three logical statements following the first statement and connecting with the last statement. [9 marks]

**Set of Statements 1:**

- (a) People find apples to be a highly nutritious fruit.
- (b) **There is an increase in the demand for apples.**
- (c) **The growth/supply of apples normally has a prolonged time lag.**
- (d) **The market experiences excess demand.**
- (e) Therefore, the equilibrium price of apples increases.

**Set of Statements 2:**

- (a) There is an increase in the number of cardiac patients (with heart or blood problems).
- (b) **The demand for coronary stents increases (to supply blood to the heart).**
- (c) **Pharmaceutical companies raise the price of stents.**
- (d) **Many cardiac patients lose their lives as they cannot afford the expensive stents.**
- (e) The government imposes a price ceiling in the market.

**Set of Statements 3:**

- (a) The level of consumer confidence regarding political stability in an economy increases.
- (b) **Consumption expenditure and investment spending in the economy begin to rise.**
- (c) **Aggregate demand (AD) in the economy reaches closer to the potential output.**
- (d) **With higher spending, domestic employment increases (i.e. unemployment falls).**
- (e) Inflation increases in the economy.

- 2) Read the extract below and explain the logic behind the government's value judgement.

[4 marks]

**Higher fuel taxes, fewer subsidies are good policy**

The Indian central government raised its excise duty on diesel and petrol in March and May 2020. Higher taxes could yield up to 1% of GDP, which could prove vital during the recession caused by the global COVID19 pandemic. Petrol in India is far cheaper than in Europe or Japan, though more expensive than in the USA where fuel taxes are low. However, India is far more polluted. It has been argued that fuel taxes need to be raised even further to curb consumption and to create incentives for households and firms to switch to electric alternatives. This will take time to develop and implement, but technological change and progress is already spreading fast with electric rickshaws.

Adapted from: <https://timesofindia.indiatimes.com/blogs/Swaminomics/higher-fuel-taxes-fewer-subsidies-are-good-policy/>

**The decision of the central government to increase the excise duty on petrol and diesel does not seem logical as it would not necessarily incentivise car owners to switch to electric alternatives in order to curb pollution. Cars owners of diesel and petrol vehicles are unlikely to be deterred from using their private modes of transports (such as two-wheeler vehicles and motor cars) simply because of another hike in the excise duty of fuel.**

**By contrast, the introduction of subsidies for electric cars might be more effective in achieving the aim of getting people to switch to alternative green technologies, as this helps to reduce the price of these (electric) cars. Nevertheless, long-term benefits can materialise by creating and spreading awareness about the need to protect the environment. In this way, there may not need to be any hikes in excise duty or fuel taxes. Of course, economists could present the case for the use of both excise duties *and* fuel taxes to achieve the government's aim.**

**Worksheet 20**  
**Economics Methodology (2) – The Use of Hypotheses**

1) Define the term *hypothesis*. [2 marks]

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2) Explain **one** function of hypotheses in economics. [2 marks]

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3) Construct **two** statements that could qualify as an economic hypothesis and identify the relevant variables under such study. [4 marks]

**Hypothesis:** .....

**Variable(s):** .....

**Hypothesis:** .....

**Variable(s):** .....

4) Explain the difference between a *null hypothesis* and an *alternative hypothesis*. [4 marks]

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5) The following are steps in the process of hypothesis testing. Place each step in the correct order, with 1 being the first step and 5 being the final step in the process. [5 marks]

- ..... Select appropriate data collection methods in relation to the variables under investigation.
- ..... Analyze and weigh up the empirical evidence to support or reject the hypothesis.
- ..... State the null hypothesis, assuming it to be true.
- ..... Conclude whether the hypothesis will be either null or alternative.
- ..... Determine the level of significance of the variables and their validity.

**Worksheet 20**  
**Economics Methodology (2) – The Use of Hypotheses**

**Answers**

- 1) Define the term *hypothesis*. [2 marks]

A hypothesis refers to an assumption, notion or educated guess on any cause and effect relationship made prior to conducting research. Hypotheses are often based on an observation or idea that helps to explain something which then becomes a subject of investigation.

- 2) Explain **one** function of hypotheses in economics. [2 marks]

In economic studies, hypotheses are used to help explain the relationship between dependent and independent variables (such as an increase in excise duty and the impact on the supply of a product) or investigating cause and effect relationships (such as between the level of consumer confidence and real GDP for an economy).

- 3) Construct **two** statements that could qualify as an economic hypothesis and identify the relevant variables under such study. [4 marks]

Answers will vary. The answers provided below are for illustrative purposes only.

**Hypothesis:** If the price of bread falls, the quantity of bread bought will increase per time period.

**Variable(s):** Price of bread (per loaf) and the quantity of bread demanded per time period.

**Hypothesis:** If the government imposes a price ceiling (maximum price) on all residential properties, then the supply of residential properties will fall.

**Variable(s):** The price ceiling (maximum price) on residential properties plus the number of residential properties supplied by property owners.

- 4) Explain the difference between a *null hypothesis* and an *alternative hypothesis*. [4 marks]

A *null hypothesis* states the exact opposite of what a researcher predicts or expects. It basically defines the statement that suggests there is no exact or actual relationship between the variables under investigation, i.e. one variable does not affect the other. Hence, results or correlations are due to chance or other factors (consider the *ceteris paribus* assumption), rather than supporting the idea or issue being investigated.

By contrast, an *alternative hypothesis* makes a statement that suggests there is a statistically important relationship between the variables being studied, i.e. one variable has an effect on the other. The outcome, based on experiments and empirical evidence, is as expected by researchers. The alternative hypothesis states that the outcomes are not due to chance, but the result or correlation does support the theory being investigated.

- 5) The following are steps in the process of hypothesis testing. Place each step in the correct order, with 1 being the first step and 5 being the final step in the process. [5 marks]

- (2) Select appropriate data collection methods in relation to the variables under investigation.
- (4) Analyze and weigh up the empirical evidence to support or reject the hypothesis.
- (1) State the null hypothesis, assuming it to be true.
- (5) Conclude whether the hypothesis will be either null or alternative.
- (3) Determine the level of significance of the variables and their validity.

**Worksheet 21**  
**Economics Methodology (3) – Economic Laws & Theories**

1) In terms of economics, define the term *law*. [2 marks]

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2) Distinguish between a *hypothesis* and a *theory*. [4 marks]

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3) Using an example, explain the *ceteris paribus* assumption in economics. [4 marks]

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4) Explain the importance of the *ceteris paribus* assumption in the application of laws used in economic studies. [4 marks]

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5) Describe why empirical evidence is of significance in economic studies. [2 marks]

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6) Explain how refutation is significant for devising an economic theory or hypothesis. [4 marks]

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**Worksheet 21**  
**Economics Methodology (3) – Economic Laws & Theories**

**Answers**

- 1) In terms of economics, define the term *law*. [2 marks]

An economic law is a statement that describes an event that has universal and practical applications which facilitate the development of theories as well as models. An example is the law of demand, which states that quantity demanded increases if the price of a product falls.

- 2) Distinguish between a *hypothesis* and a *theory*. [4 marks]

A *hypothesis* is an educated guess (statement of prediction) about a cause-and-effect relationship in a single event, with reference to the variables under investigation. By contrast, a *theory* is a systematic general explanation of a set of interrelated economic events in the real world that are usually based on different hypotheses and supported by data and empirical evidence which have not yet been refuted. In essence, a hypothesis is an idea or assumption made before any research has been completed for the purpose of testing, whereas a theory is a notion used to explain economic phenomena that are already supported by research data and findings.

- 3) Using an example, explain the *ceteris paribus* assumption in economics. [4 marks]

In any economic studies or research, assumptions are made to simplify the hypotheses, theories, and analyses. An assumption is the unexamined belief used to construct theories and hypotheses in economics. The term *ceteris paribus* is a Latin phrase meaning all other factors remain unchanged (constant). This assumption fundamental to any research or analysis in economics. It is used to show the effect that one economic variable has on another, provided that all other variables remain unchanged in the research or analysis.

The *ceteris paribus* assumption is applied to economic analysis in order to narrow down the scope of the research. For example, when hypothesizing if an increase in the price of branded bottled water will reduced the quantity demanded, economists apply the *ceteris paribus* assumption. In this way, they are looking at how the change in price of branded bottled water is the only variable (under investigation) that affects the quantity of branded bottled water being consumed. This assumption holds other variables as equal (constant), meaning other factors such as the packaging of the bottled water or the level of disposable income are assumed to not have changed so do not have any impact in this hypothesis. Ultimately, this allows economists to study the effects of one variable at a time.

- 4) Explain the importance of the *ceteris paribus* assumption in the application of laws used in economic studies. [2 marks]

The *ceteris paribus* assumption is important in economic studies because it allows economists to hold other variables constant for the simplicity of analyzing the effect of one variable. Since the study of any economic event involves multiple dynamic variables, by not holding “other things equal”, it becomes difficult to understand what effect each variable has on another variable.

The assumption allows economists to test a hypothesis in order to identify a causal relationship. However, in practice, it is difficult to isolate the variables in the real world since most economic variables are affected by more than just one cause. Nevertheless, economic models are simplified to help explain real world phenomena, so depend on the *ceteris paribus* assumption being made about independent variables.

- 5) Describe why empirical evidence is of significance in economic studies. [2 marks]

Empirical evidence refers to real-world information, observations and data acquired by research. Unlike the natural sciences, where experiments can be used to test hypotheses, this approach is quite limited in economics (a social science). Thus, it is important for economists to gather empirical evidence as the data can be applied to econometrics, which is a quantitative approach to find a correlation between real-world evidences and the hypothesis.

- 6) Explain how refutation is significant for devising an economic theory or hypothesis. [4 marks]

Refutation refers to the disapproval of something, or to prove a claim as false. In formulating an economic theory or hypothesis, it is significant to apply refutation as this allows an economist to gather empirical evidence, data and observations to disapprove a hypothesis in order to validate or invalidate a theory in economics. This enables a hypothesis or theory in economics to be refuted where appropriate in order to improve our knowledge and understanding of economics in explaining real-world phenomena.

**Worksheet 22**  
**Economics methodology (4) – Economic Models**

1) Define the term *models* as used in economics. [2 marks]

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2) State whether the following statements are True or False. [4 marks]

(a) Models in economics illustrate laws and theories, using diagrams and mathematical equations that describe the interrelationships between the variables. .....

(b) Laws are statements which describe an event that has limited applicability for certain situations only. .....

(c) Hypotheses explain the reasons behind the occurrence of events and make predictions. .....

(d) A hypothesis is a statement of prediction about a cause-and-effect relationship of a single event, with reference to the variables under investigation. .....

3) Outline the role of economic modelling in economics research. [2 marks]

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4) Distinguish between the use of models in economics and the natural sciences. [3 marks]

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5) Economic models may be linear (which implies that the change in one variable may affect another variable in a clearly defined way) or it could be non-linear (whereby the interrelationships between two variables may not materialize in the same proportion).

Three methods by which economists can develop economic models are shown below. Identify which of these methods is the most effective for an economist to support a linear or non-linear relationship, and briefly explain the reason for your choice. [3 marks]

- A. Apply knowledge of economic theory to assert the type of relationship between the variables.
- B. Conduct behavioural experiments and make quantitative observations that indicate the type of the relationship between the variables under investigation.
- C. Plot projected data points for a variable against another variable on a graph to visualise a potential relationship.

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**Worksheet 22**  
**Economics methodology (4) – Economic Models**

**Answers**

- 1) Define the term *models* as used in economics. [2 marks]

Models in economics illustrate different laws and theories by using diagrams and mathematical equations that describe the interrelationships between the variables. A model stems from a hypothesis after it has been tested and deemed to be a valid observation.

- 2) State whether the following statements are True or False. [4 marks]

- (a) Models in economics illustrate laws and theories, using diagrams and mathematical equations that describe the interrelationships between the variables. True
- (b) Laws are statements which describe an event that has limited applicability for certain situations only. **The law of demand, for example, has many applications** False
- (c) Hypotheses explain the reasons behind the occurrence of events and make predictions. **A hypothesis is an idea made before research has been completed** False
- (d) A hypothesis is a statement of prediction about a cause-and-effect relationship of a single event, with reference to the variables under investigation. True

- 3) Outline the role of economic modelling in economics research. [2 marks]

Economic modelling refers to the use of models to identify and establish relationships between the variables being investigated. Models act as a tool in economics research and offers scope for further analysis. Models provide a framework for investigation to determine the causal effects and interrelationships between the identified variables and the economic event being investigated. For instance, the circular flow of income model describes the various relationships between economic entities in the economy by addressing the notions of output, income, and expenditure.

- 4) Distinguish between the use of models in economics and the natural sciences. [2 marks]

Models are used in both social and natural sciences in order to explain, predict, modify and/or guide human behaviours. When developing models in the social sciences, economists focus on the general patterns or specific actions of individuals and groups. By contrast, in the natural sciences, such as in biology, models are used to investigate the structures and mechanisms of humans. Thus, the use of models in economics differs from the natural sciences in that they are based on the interrelationships between human beings and their interactions in the society.

- 5) Economic models may be linear (which implies that the change in one variable may affect another variable in a clearly defined way) or it could be non-linear (whereby the interrelationships between two variables may not materialize in the same proportion).

Three methods by which economists can develop economic models are shown below. Identify which of these methods is the most effective for an economist to support a linear or non-linear relationship, and briefly explain the reason for your choice. [3 marks]

- A. Apply knowledge of economic theory to assert the form of the relationship.
- B. **Conduct behavioural experiments and make quantitative observations that indicate the type of the relationship between the variables under investigation.**
- C. Plot projected data points for a variable against another variable on a graph to visualise a potential relationship.

It is because the behavioural experiments can help economists to understand the extent to which there is any influence of the dependent variable on other variables under investigation. Quantitative observations also help to keep economic models and predictions objective, rather than subjective.



**Worksheet 23**  
**Economic Thought (1) – 18<sup>th</sup> Century**

- 1) Comment on the influence of Adam Smith's *The Wealth of Nations* to the development of economic theories and models. [2 marks]

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- 2) In the context of Adam Smith's ideas, define the term *invisible hand*. [2 marks]

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- 3) Explain the role of market forces in classical economic theory. [4 marks]

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- 4) "According to Adam Smith, the invisible hand prevents the emergence of imperfect markets." Explain whether this statement is true or false. [3 marks]

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- 5) "Adam Smith argued that economic growth is dependent on the division of labour in an economy." Explain whether this statement is true or false. [2 marks]

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- 6) With reference to Adam Smith's notion of specialization in *The Wealth of Nations*, explain the theory of absolute advantage in the context of international trade. [4 marks]

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**Worksheet 23**  
**Economic Thought (1) – 18<sup>th</sup> Century**

**Answers**

- 1) Comment on the influence of Adam Smith's *The Wealth of Nations* to the development of economic theories and models. [2 marks]

In his work *The Wealth of Nations*, Adam Smith argued that natural laws which govern human behaviour and society are often conducted harmoniously. Taking the ideas from the natural laws in the physical environment by Isaac Newton, Smith explained how an economy can function harmoniously and grow without any government intervention. Smith strongly emphasized the natural laws of the social world where individuals will behave in a "self-interested" manner, which he argued will allow individuals to act in the best interest of the society as a whole. These behaviours are driven by competition, which was a fundamental idea for Adam's development of economic theories and models (such as the notion of the invisible hand and the theory of absolute advantage).

- 2) In the context of Adam Smith's ideas, define the term *invisible hand*. [2 marks]

The *invisible hand* is a cornerstone concept of a free market economic system, which was advocated by Adam Smith in his work *The Wealth of Nations*. The term refers to the existence of countless decisions made by individuals within competing sectors of an economy in which they are self-regulated through interactions in different markets and act in their self/best interest. Thus, the invisible hand allows the market to operate efficiently without the need for any government intervention.

- 3) Explain the role of market forces in classical economic theory. [4 marks]

According to Adam Smith, market forces work on the premise that decision makers are rational and act in their own best self-interest. Due to the existence of competition in the market economy, firms produce the goods and services that leads to the greatest benefit (or welfare) to those with effective demand. Smith argued that market forces will operate through the forces of the *invisible hand* so strong repressive governments are not essential to the workings of an efficient economy. Furthermore, he suggested that the competitive market forces of demand and supply will lead to the efficient allocation of resources for the greater good of the society. Hence, he advocated a *laissez faire* approach, rather than government intervention. He believed the role of the government is simply to take care of the provision of public goods, such as national defence/security and the provision of public infrastructure.

- 4) "According to Adam Smith, the invisible hand prevents the emergence of imperfect markets." Explain whether this statement is true or false. [3 marks]

**TRUE** – The *invisible hand* creates a *laissez faire* economy, without any government intervention. In such an economy, the competition between buyers and sellers will determine the equilibrium price (market clearing price) and efficient allocation of resources. The fact that firms can enter and exit the markets freely makes it difficult for them to restrict supply to raise the price of goods, which prevents the emergence and abuse of monopoly power (i.e. imperfect markets). Thus, the competition created from the invisible hand creates allocative efficiency.

- 5) "Adam Smith argued that economic growth is dependent on the division of labour in an economy." Explain whether this statement is true or false. [2 marks]

**TRUE** – In Adam Smith's *The Wealth of Nations*, he argued that division of labour, which refers to the separation of larger tasks into smaller tasks that are completed by different workers, leads to the idea of specialization of labour. It is through specialization and the division of labour that workers are able focus on what they are best at producing so in theory this allows them to produce greater levels of outputs more efficiently. Hence, through the division of labour in an economy, both productivity and efficiency increase, which in turn lead to economic growth.

- 6) With reference to Adam Smith's notion of specialization in *The Wealth of Nations*, explain the theory of absolute advantage in the context of international trade. [4 marks]

According to Adam Smith in *The Wealth of Nations*, the idea of specialization should allow domestic firms in a country to produce at the lowest average cost. Thus, these firms are considered to have an absolute advantage in the production of certain goods and/or services. The theory suggest that when trading with foreign countries, the nation should trade using the goods and services with which they are able to produce at the lowest average cost – giving the nation a cost advantage other countries. If all trading partners are able to specialize in the output and export of the products that they have an absolute advantage in, then all countries involved will be better off (in theory). In essence, the theory of absolute advantage suggests that a country should allocate its resources to the production and export of goods and services that they can specialise in whilst incurring the lowest average cost.

**Worksheet 24**  
**Economic Thought (2) – 19<sup>th</sup> Century (Part 1)**

1) Explain the idea of utilitarianism from 19th Century classical economics. [2 marks]

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2) Define the term *marginal utility*. [2 marks]

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3) State **two** common beliefs that serve as the basis for the classical school of economic thought. [2 marks]

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4) Apply the concept of utility theory to explain the purchasing decisions made by a rational consumer who buys additional units of good or service. [4 marks]

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5) Define the *law of diminishing marginal utility*. [2 marks]

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6) Explain the relationship between the law of diminishing marginal utility and the price of a product under classical economics. [2 marks]

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**Worksheet 24**  
**Economic Thought (2) – 19<sup>th</sup> Century (Part 1)**

**Answers**

- 1) Explain the idea of utilitarianism from 19th Century classical economics. [2 marks]

Utilitarianism is a philosophy of ethics which was first advocated by Jeremy Bentham (1748 – 1832) in the 19<sup>th</sup> Century. He argued that an action by an individual is right only if it promotes the maximum satisfaction for the largest number of people. Other philosophers, such as John Stuart Mill (1806 – 1873), extended Bentham's idea that the greatest satisfaction is achieved when humans are free to make their own decisions rather than the use of force on humans to make decisions.

- 2) Define the term *marginal utility*. [2 marks]

The term 'marginal' refers to additional or extra of something. Since utility refers to the degree of satisfaction that an individual enjoys from the consumption of something, marginal utility means the additional satisfaction that a person is able to enjoy from the consumption of an extra unit of a good or service. Marginal utility serves as the basis for the theory of value (Karl Marx) and is a frequently used concept within microeconomics.

- 3) State **two** common beliefs that serve as the basis for the classical school of economic thought. [2 marks]

- The emphasis on the ability of market forces (the price mechanism) to self-regulate towards an efficient allocation of resources through the *invisible hand*.
- Supporting the idea of economic and political freedom with minimal state intervention to promote competition for greater efficiency in different markets.

- 4) Apply the concept of utility theory to explain the purchasing decisions made by a rational consumer who buys additional units of good or service. [4 marks]

Utility refers to the degree of satisfaction that an individual enjoys from the consumption of a good or service. According to Alfred Marshall, a 19<sup>th</sup> Century economist from England, every rational consumer aims to maximise his or her own utility and this is possible when the potential utility derived from the consumption of a product equals the price paid.

More importantly, the decision to buy an additional unit of a good or service rests on the marginal utility for the individual. Thus, if an individual is receiving lower marginal utility from consuming one more unit of a good, the individual will only buy more if the price falls. This extends to the law of demand whereby the demand for a good or service is inversely related to its price. The concept of marginal utility forms the basis of our understanding of demand and supply in today's study of microeconomics.

- 5) Define the *law of diminishing marginal utility*. [2 marks]

The law of diminishing marginal utility in Alfred Marshall's *Principles of Economics* (1890) states that when an individual consumes an additional (marginal) unit of a product, the degree of satisfaction derived from the consumption of that additional unit falls. The underlying assumption for this law is that the product must be homogeneous and therefore the continuous consumption of that particular good or service yields diminishing marginal utility to the consumer.

- 6) Explain the relationship between the law of diminishing marginal utility and the price of a product under classical economics. [2 marks]

According to the law of diminishing marginal utility, a rational consumer seeking to maximise his or her utility will increase the number of units of a product consumed as long as the marginal utility (MU) is greater than the price (P) for the good, whereby the price is the marginal cost (MC) of consumption. Similarly, when the MU is lower than the price (i.e. MC) of consumption, the individual will reduce consumption until the MU equals the MC, which is the market equilibrium in a competitive market. Essentially, this means consumers will buy additional units of a product up to the point where marginal utility is no longer positive (beneficial) to the consumer.

**Worksheet 25**  
**Economic Thought (3) – 19<sup>th</sup> Century (Part 2)**

1) Explain the meaning of *Say's Law*. [2 marks]

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2) Apply the circular flow of income model to explain *Say's Law*. [4 marks]

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3) With reference to the concept of *surplus value*, explain Karl Marx's criticism of classical economic thought. [4 marks]

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4) With reference to Marxist critique of classical economic thought, identify whether the following statements are true or false. [8 marks]

- (a) The idea of competition from classical economics encourages capitalist to adopt capital-intensive technology, which replaces human labour. ....
- (b) Marx's ideas formed the foundation for a capitalist regime. ....
- (c) Unemployment rises if the economy is left to the invisible hands of the market. ....
- (d) Marx advocated for the idea of private ownership and a free market system. ....
- (e) Marx viewed capitalism as the natural transformation of economic systems from feudalism and mercantilism. ....
- (f) Capitalism is only a temporary stage in economic transformation and the economy eventually suffers through endless series of economic crises. ....
- (g) The desires of industrialists and factory owners encourage greater production which all citizens in the economy can benefit from. ....
- (h) People of different economic and social status work harmoniously in the economy, with little conflict and social contradictions. ....

**Worksheet 25**  
**Economic Thought (3) – 19<sup>th</sup> Century (Part 2)**

**Answers**

- 1) Explain the meaning of *Say's Law*. [2 marks]

*Say's Law* states that "supply creates its own demand". In 1803, John Baptiste Say suggested that the key to economic growth is not by increasing aggregate demand, but by increasing production (aggregate supply). It was John Maynard Keynes (1936) who summarized *Say's Law* in *The General Theory of Money*, stating "From the time of (John Baptiste) Say and (David) Ricardo, the classical economists have taught that supply creates its own demand..."

- 2) Apply the circular flow of income model to explain *Say's Law*. [4 marks]

*Say's Law* can be illustrated using the circular flow of income model. Say argued that in a closed economy, in order for producers to supply goods and services, they will need to pay households in exchange for their factors of production (such as labour). The supply of goods then creates a market for other products as households demand goods and services with the factor incomes they earned (such as wages). Since the supply from producers creates the demand for households, theoretically supply has the same value as demand in the economy. This means that there will be no over-production and full employment can be reached in the macroeconomy (i.e. where the aggregate demand for goods and services will equal to the total output produced). In this way, (aggregate) supply has created its own (aggregate) demand.

- 3) With reference to the concept of *surplus value*, explain Karl Marx's criticism of classical economic thought. [4 marks]

Karl Max was a German philosopher in the 19<sup>th</sup> Century and extends his ideas on *the labour theory of value* to offer an alternative perspective to classical economics. *Surplus value* refers to the difference between the price an individual pays for a good or service compared to the cost or value of labour used to produce the good or service. Marx observed that the surplus value was often very high which illustrates the exploitation of labourers as the price paid by consumers for the product was usually far greater than the wages paid to the labourers.

Marx criticised and challenged Adam Smith's idea of a free market system and argued that the "invisible hand" and "self-regulating market economy" in the absence of government intervention simply results in the exploitation of labour. Furthermore, Marx criticised that the promotion of private ownership of factor resources, and any system that favours capitalists would be a catalyst in the exploitation of workers for monetary gains against social welfare.

- 4) With reference to Marxist critique of classical economic thought, identify whether the following statements are true or false. [8 marks]

- |   |       |
|---|-------|
| (a) The idea of competition from classical economics encourages capitalist to adopt capital-intensive technology, which replaces human labour.                              | True  |
| (b) Marx's ideas formed the foundation for a capitalist regime. <b>Marx was a socialist, rather than a capitalist</b>   | False |
| (c) Unemployment rises if the economy is left to the invisible hands of the market. <b>This is not the view of classical economists, but certainly the view of Marxists</b> | True  |
| (d) Marx advocated for the idea of private ownership and a free market system.  | False |
| (e) Marx viewed capitalism as the natural transformation of economic systems from feudalism and mercantilism.   | True  |
| (f) Capitalism is only a temporary stage in economic transformation and the economy eventually suffers through endless series of economic crises.                           | True  |
| (g) The desires of industrialists and factory owners encourage greater production which all citizens in the economy can benefit from.                                       | False |
| (h) People of different economic and social status work harmoniously in the economy, with little conflict and social contradictions.  | False |



**Worksheet 26**  
**Economic Thought (4) – 20<sup>th</sup> Century**

**Answers**

- 1) Explain how John Maynard Keynes's ideas from the Great Depression in the 1930s contrast with the classical theories and ideas of Adam Smith of the 18<sup>th</sup> Century. [4 marks]

Adam Smith argued that even when an economy is experiencing an overall decrease in aggregate demand and a fall in spending (i.e. it is not operating at full employment), the *invisible hand* will adjust market forces such that prices will fall and expenditure will eventually increase, thereby increasing the overall output in the economy and returning the economy to full employment.

However, during the 1930s, there was a massive decline in output and high unemployment which led to the Great Depression. The theories and ideas from Adam Smith contrast with the 20th century economist, John Maynard Keynes, in that he argued it was not possible to achieve full employment for a prolonged time, especially when spending levels decrease in the economy (in a recession). This will lead to unemployment for a long period of time and markets may fail to clear as Keynes rejected the model of a *laissez faire* economy. He argued there is a strong need for government intervention or stimulus to increase output and bring the economy back to full employment.

- 2) Explain how the theory of sticky wage explains the Keynesian model of output and employment in the economy. [4 marks]

According to Keynes, wages tend to be “sticky” during changing market conditions. This means wages and prices do not fall easily with changes in market conditions in the way suggested by classical economists. For example, Keynes took the Great Depression as the starting point for his sticky wage theory, where the fall in spending during this period did not cause wages to fall quickly as workers were unwilling to accept lower nominal wages. As a result, producers continued to incur higher costs of production. As such, producers lack the willingness and ability to increase their output, so it became impossible for the economy to revert back to full employment.

Thus, according to Keynes, sticky wages make it impossible for an economy to pull out of recession unless the government intervenes by increasing spending and/or lowering taxes. Both of these interventionist measures can have a positive multiplier effect on the economy enabling it to have faster economic recovery, even when full employment does not occur in an economy all the time.

- 3) State the **two** schools of thought that were prevalent during the 1970s. [2 marks]
- i. Monetarists / Monetarism
  - ii. New (neo) classical economists / New (neo) classical economics

- 4) Explain how Milton Friedman's ideas from the 1970s contrasts with the ideas of Keynesian economics. [4 marks]

Milton Friedman was the pioneer economist for the monetarist school of economic thought and placed emphasis on the role of money in the economy. During the 1970s, the many countries experienced cost-push inflation due to the oil crisis of 1973. Friedman argued that the money supply plays an important role in the economy as it affects the level of output in the short run and in the long run, and directly influences the general price level. His ideas, which became the foundation of monetarism, developed the study of the money supply as a core part of monetary policy.

Monetarism is also aligned with classical theories of economics with respect to the invisible hand of the price mechanism, whereby through influencing the money supply (controlling the amount of money in circulation) the economy is able to achieve full employment without any need for government intervention. This effectively refutes and contrasts with Keynesian economics, where active government intervention and fiscal stimulus are needed to bring the economy back to full employment.



**Worksheet 27**  
**Economic Thought (5) – 21<sup>st</sup> Century**

1) State **three** prominent developments in economic thought of the 21st Century. [3 marks]

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2) Define the term *behavioural economics*. [2 marks]

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3) State **two** individuals who have influenced the study of behavioural economics. [2 marks]

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4) Distinguish between behavioural economics and mainstream (classical) economics. [4 marks]

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5) Explain the growing importance of sustainability for an economy. [4 marks]

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6) Explain how the circular economy may be effective in helping to achieve the sustainable development goals. [4 marks]

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**Worksheet 27**  
**Economic Thought (5) – 21<sup>st</sup> Century**

**Answers**

1) State **three** prominent developments in economic thought of the 21st Century. [3 marks]

- The integration of economics and psychology to understand rationality of consumers in buying decisions.
- Development of economic models that explain the interdependence between society, the economy, and the environment.
- The concept of a circular economy for sustainable economic development.

2) Define the term *behavioural economics*. [2 marks]

Behavioural economics is a branch of economics that has been prevalent in the 21<sup>st</sup> Century. It examines the influence of cognitive, psychological, emotional, and cultural factors on the decision-making behaviour of individuals. It assumes that when individuals make decisions, they are not 100% rational. As such, experimentation and empirical evidence provides a framework in the study of how individuals behave when making decisions.

3) State **two** individuals who have influenced the study of behavioural economics. [2 marks]

- Daniel Kahneman (2002), Israeli psychologist
- Richard Thaler (2017), American economist
- *Accept any other prominent academic in the field of behavioural economics*

4) Distinguish between behavioural economics and mainstream (classical) economics. [4 marks]

Behavioural economics is concerned with the authentic behaviours of individuals, which questions their rationality when making decisions. By contrast, mainstream economics is based on the orthodox where every individual makes rational decisions in order to maximize their marginal utility from the consumption of a good or service. One key difference between the two is that behavioural economics recognizes the limitations of mainstream economics, where individuals do not have perfect information in order to help them to make rational choices. Furthermore, individuals can be nudged by the context or choice architecture which may create biases and psychological blind spots in their decision-making.

5) Explain the growing importance of sustainability for an economy. [4 marks]

Sustainability is one of the nine key concepts underpinning the IB Economics course and describes the actions taken by today's generation to support the long-term economic growth and development of future generations. As such, policy makers are now being influenced by the concept of sustainability and the growing interdependence between the economy, society and the environment in the pursuit of a more balanced and sustainable approach to economic growth.

The idea of sustainable growth and development is built on the basis of economic sustainability (profit), social sustainability (people) and ecological sustainability (planet) in the framework of a circular economy. A balanced economic growth takes the approach of using resources that can be recycled for further productive use and moving away from a conventional "take-make-dispose" extractive industrial model that was common during the 18<sup>th</sup> and 19<sup>th</sup> centuries.

6) Explain how the circular economy may be effective in helping to achieve the sustainable development goals. [4 marks]

A circular economy is based on the principles of restoration of resources where once produced, can be redeployed back into the production process rather than discarding it as waste and/or pollution. The objective is to optimize the production process through establishing a more efficient and environmentally sound alternative to the conventional linear economy, where resources are maximized in terms of their use and then disposed of, irrespective of whether they are non-biodegradable. Instead, the circular economy ensures resources are regenerated into further products and materials at the end of their life. Ultimately, this minimizes the ecological impacts of economic activity and negative externalities whilst maintaining employment and a more sustainable increase in real GDP.

**Worksheet 28**  
**Unit 1.2 – Revision Questions (1)**

1) Match each of the following sentences with the correct term from the clues below. [9 marks]

- |                    |                     |                    |
|--------------------|---------------------|--------------------|
| Positive economics | Normative economics | Logic              |
| Hypothesis         | Ceteris paribus     | Empirical evidence |
| Equality           | Equity              | Refutation         |

(a)	If the price of movie tickets at the cinema increases, then fewer people will watch movies at the cinema.	
(b)	There are often far more male CEOs than female CEOs in large multinational companies.	
(c)	This is an assumption used in economic analysis which holds other factors constant and is Latin for “other things remain equal”.	
(d)	The economic concept of fairness, such as the use of taxation to redistribute income and wealth in the economy.	
(e)	There should be a universal basic income (UBI) for all developed nations (high-income countries).	
(f)	A sequence of statements that are based on reasoning and rationality.	
(g)	An economic notion whereby the same support is given to everyone to ensure they have fair and equal access to success.	
(h)	Refers to information that is collected by researchers to help uncover answers to questions that can have implications for society.	
(i)	The action of contradicting something or to prove something is false.	

2) For each series of words below, identify the odd one out and provide a reason for your answer. [12 marks]

- (a)      Competition                      Invisible hand                      Laissez faire                      Command economy  
.....
- (b)      Surplus value                      *Das Kapital*                      Communism                      Competition  
.....
- (c)      Jean-Baptiste Say                      John Stuart Mill                      Milton Friedman                      Karl Marx  
.....
- (d)      Sticky wages                      Government intervention                      Laissez faire                      *The General Theory*  
.....
- (e)      Value judgment                      Equity                      Ought to                      Logic  
.....
- (f)      Generalize                      Refute                      Predict                      Empirical evidence  
.....

**Worksheet 28**  
**Unit 1.2 – Revision Questions (1)**

**Answers**

1) Match each of the following sentences with the correct term from the clues below. [9 marks]

(a)	If the price of movie tickets at the cinema increases, then fewer people will watch movies at the cinema.	Hypothesis
(b)	There are often far more male CEOs than female CEOs in large multinational companies.	Positive economics
(c)	This is an assumption used in economic analysis which holds other factors constant and is Latin for “other things remain equal”.	Ceteris paribus
(d)	The economic concept of fairness, such as the use of taxation to redistribute income and wealth in the economy.	Equity
(e)	There should be a universal basic income (UBI) for all developed nations (high-income countries).	Normative economics
(f)	A sequence of statements that are based on reasoning and rationality.	Logic
(g)	An economic notion whereby the same support is given to everyone to ensure they have fair and equal access to success.	Equality
(h)	Refers to information that is collected by researchers to help uncover answers to questions that can have implications for society.	Empirical evidence
(i)	The action of contradicting something or to prove something is false.	Refutation

2) For each series of words below, identify the odd one out and provide a reason for your answer. [12 marks]

(a) Competition                  Invisible hand                  Laissez faire                  **Command economy**

**Command economy is the odd one out because the other three options support Adam Smith’s economic ideas from the 18<sup>th</sup> Century.**

(b) Surplus value                  *Das Kapital*                  Communism                  **Competition**

**Competition is the odd one out as the other options relate to the ideas (or works) from Karl Marx during the 19<sup>th</sup> Century.**

(c) Jean-Baptiste Say                  John Stuart Mill                  **Milton Friedman**                  Karl Marx

**Milton Friedman is the odd one out as he was one of the notable economists from the 20<sup>th</sup> Century whilst the rest have their works published in the 19<sup>th</sup> Century.**

(d) Sticky wages                  Government intervention                  **Laissez faire**                  *The General Theory*

**Laissez faire is the odd one out as the other options relate to John Maynard Keynes’ works or ideas.**

(e) Value judgment                  Equity                  Ought to                  **Logic**

**Logic is the odd one out because the other options relate to the study of normative economics.**

(f) **Generalize**                  Refute                  Predict                  Empirical evidence

**Generalize is the odd one out because the other options relate to the study of positive economics.**

**Worksheet 29**  
**Unit 1.2 – Revision Questions (2)**

- 1) Complete the following sentences by specifying the:
- Name of the economic school of thought, theory, model, or law
  - Name of the economist, psychologist, or philosopher
  - The century in which the economic idea, theory, model, or law was most prevalent. [30 marks]

Statement	Name of theory or School of thought	Name of economist	Period (century)
(a) The world has certain limited resources that people want to acquire through trade and a nation's wealth and power are best served by increasing exports.			
(b) The father of economics who published the book " <i>The Wealth of Nations</i> " in 1776.			
(c) The economist who believed that wages are "sticky" and without government intervention, the economy cannot reach the full employment level of output.			
(d) Regarded as the founder of utilitarianism, meaning the greatest benefit to the greatest number should be the guiding principle for policy makers and economic activity.			
(e) This economist was an influential follower of Smith's ideas and supported the idea of international trade.			
(f) His works show that individuals are not always rational, and people's decisions are influenced by imperfect information, nudges and biases.			
(g) He believed that industrialists are profit driven and will exploit labourers under a free market system to maximize the difference between the price charged and wages paid.			
(h) The law that states that the production (supply) of goods and services becomes the source of aggregate demand in an economy.			
(i) He advocated free trade based on the notion of specialization, so a country can produce goods more efficiently than another country.			
(j) The economist who emphasized the role of the money supply as the main tool to achieve the full employment level of output.			

- 2) Fill in the missing words, using the list shown, to complete the following sentences. [2 marks]

Capitalism    Division of labour    Invisible hand    Say's Law    Specialization    Utility

- (a) One of Adam Smith's main contributions to economic theory was the idea of ..... and ..... in order to increase productivity and output in the economy.
- (b) The ..... was an idea advocated by Adam Smith in the 18<sup>th</sup> Century, as he believed that competition in a free market economy would create full employment.
- (c) The theory of ..... assumes that all rational individuals will make decisions which maximize his/her satisfaction, benefit or happiness.
- (d) ..... states that "Supply creates its own demand", which can be explained using the circular flow of income model, i.e. output creates factor incomes which generate demand in the economy.
- (e) Karl Marx advocated that ..... is only a temporary stage in economic transformation.

**Worksheet 29**  
**Unit 1.2 – Revision Questions (2)**

**Answers**

- 1) Complete the following sentences by specifying the:
- Name of the economic school of thought, theory, model, or law
  - Name of the economist, psychologist, or philosopher
  - The century in which the economic idea, theory, model, or law was most prevalent. [30 marks]

Statement	Name of theory or School of thought	Name of economist	Period (Century)
(a) The world has certain limited resources that people want to acquire through trade and a nation's wealth and power are best served by increasing exports.	Mercantilism	Adam Smith	18 <sup>th</sup> Century
(b) The father of economics who published the book " <i>The Wealth of Nations</i> " in 1776.	Classical economics	Adam Smith	18 <sup>th</sup> Century
(c) The economist who believed that wages are "sticky" and without government intervention, the economy cannot reach the full employment level of output.	Keynesian economics	John Maynard Keynes	19 <sup>th</sup> Century
(d) Regarded as the founder of utilitarianism, meaning the greatest benefit to the greatest number should be the guiding principle for policy makers and economic activity.	Theory of utility (or theory of utilitarianism)	Jeremy Bentham	19 <sup>th</sup> Century
(e) This economist was an influential follower of Smith's ideas and supported the idea of international trade.	Theory of comparative advantage	David Ricardo	19 <sup>th</sup> Century
(f) His works show that individuals are not always rational, and people's decisions are influenced by imperfect information, nudges and biases.	Behavioural economics	Richard Thaler	21 <sup>st</sup> Century
(g) He believed that industrialists are profit driven and will exploit labourers under a free market system to maximize the difference between the price charged and wages paid.	Surplus value	Karl Marx	19 <sup>th</sup> Century
(h) The law that states that the production (supply) of goods and services becomes the source of aggregate demand in an economy.	Say's Law	Jean-Baptiste Say	19 <sup>th</sup> Century
(i) He advocated free trade based on the notion of specialization, so a country can produce goods more efficiently than another country.	Theory of absolute advantage	Adam Smith	18 <sup>th</sup> Century
(j) The economist who emphasized the role of the money supply as the main tool to achieve the full employment level of output.	Monetarism	Milton Friedman	20 <sup>th</sup> Century

- 2) Fill in the missing words, using the list shown, to complete the following sentences. [2 marks]
- Capitalism    Division of labour    Invisible hand    Say's Law    Specialization    Utility

- (a) One of Adam Smith's main contributions to economic theory was the idea of **division of labor** and **specialization** in order to increase productivity and output in the economy.
- (b) The **invisible hand** of the market was an idea advocated by Adam Smith in the 18<sup>th</sup> Century, as he believed that competition in a free market economy would create full employment.
- (c) The theory of **utility** assumes that all rational individuals will make decisions which maximize his/her satisfaction, benefit or happiness.
- (d) **Say's Law** states that "Supply creates its own demand", which can be explained using the circular flow of income model, i.e. output creates factor incomes which generate demand in the economy.
- (e) Karl Marx advocates that **capitalism** is only a temporary stage in economic transformation.

**Worksheet 30**  
**Unit 1.2 – Revision Questions (3)**

1) State whether the following statements are true or false and outline the reason for your answers. [10 marks]

(a) Adam Smith introduced the theory of utility and the ideas of demand and supply.

**True / False:** .....  
.....

(b) John Maynard Keynes put forward the radical idea that government intervention is needed to bring an economy back to the full employment level of output.

**True / False:** .....  
.....

(c) New (neo) classical economics refers to the school of thought that believes the amount of money in circulation in an economy is the major determinant of economic growth and inflation.

**True / False:** .....  
.....

(d) The circular economy model is based on the notion of continuous exploitation and disposal of resources in order to generate economic growth.

**True / False:** .....  
.....

(e) The underlying assumption in behavioural economics is that individuals do not make rational choices but are often affected by psychological blind spots which impair their decision-making.

**True / False:** .....  
.....

2) Comment on the role of government in relation to the economic theories and approaches you have learned in this unit. An example is shown below for your reference. [4 marks]

**Example:** Prior to the 18<sup>th</sup> Century: *A command and control approach with complete government management of economic activity.*

(a) 18<sup>th</sup> Century: .....  
.....

(b) 19<sup>th</sup> Century: .....  
.....

(c) 20<sup>th</sup> Century: .....  
.....

(d) 21<sup>st</sup> Century: .....  
.....

**Worksheet 30**  
**Unit 1.2 – Revision Questions (3)**

**Answers**

1) State whether the following statements are true or false and outline the reason for your answers. [10 marks]

(a) Adam Smith introduced the theory of utility and the ideas of demand and supply.

**FALSE** – It was Alfred Marshall from the late 19<sup>th</sup> Century who introduced the idea of utility, which built the foundation to our understanding of demand and supply concepts in the study of microeconomics.

(b) John Maynard Keynes put forward the radical idea that government intervention is needed to bring an economy back to the full employment level of output.

**TRUE** - John Maynard Keynes advocated government intervention in order to get an economy out of a recession or deflationary gap. He argued that through the Keynesian multiplier, governments need to “spend their way out of a recession.”

(c) New (neo) classical economics refers to the school of thought that believes the amount of money in circulation in an economy is the major determinant of economic growth and inflation.

**FALSE** – The relevant school of thought is called monetarism, which is attributed to the economist, Milton Friedman. “Rational expectations”, which was a model created by Robert Lucas, forms the basis of new classical economics.

*Note: the quantitative theory of money is not featured in the IB Economics syllabus.*

(d) The circular economy model is based on the notion of continuous exploitation and disposal of resources in order to generate economic growth.

**FALSE** – The circular economy is a model based on regenerative and restorative approaches to ensure a balanced and sustainable approach to economic growth.

(e) The underlying assumption in behavioural economics is that individuals do not make rational choices but are often affected by psychological blind spots which impair their decision-making.

**TRUE** - Behavioural economics argues that decision makers are not always rational or logical, and that psychological factors such as nudges are needed to facilitate choice and decision-making.

2) Comment on the role of government in relation to the economic theories and approaches you have learned in this unit. An example is shown below for your reference. [4 marks]

**Example:** Prior to the 18<sup>th</sup> Century: *A command and control approach with complete government management of economic activity.*

(a) 18<sup>th</sup> Century: **Free market system with no government intervention. The market will correct itself through the *invisible hands of the market mechanism*, as advocated by Adam Smith.**

(b) 19<sup>th</sup> Century: **The focus was on self-regulating markets for the efficient allocation of resources and government policy must focus only on increasing output.**

(c) 20<sup>th</sup> Century: **Increased government intervention for economic stability (Keynesian school of economic thought), through control of the money supply (monetarists) and supply-side policies (new/neo classical economists).**

(d) 21<sup>st</sup> Century: **Focus on the psychological aspects of human decision-making and refuting the idea that humans are always rational when making decisions. Greater government role in achieving sustainable development goals by promoting a circular economy.**