

Self-test questions

Topic 2

- 1 Which of the following metabolic activities is carried out by some prokaryotes but no eukaryotes?
 - A photosynthesis
 - B anaerobic respiration
 - C fermentation
 - D nitrogen fixation
- 2 Which aspect of water determines its solvent properties?
 - A peptide bonding
 - B hydrophobic interactions
 - C covalent bonds
 - D polarity
- 3 Cellulose found in plant cell walls is an example of a:
 - A monosaccharide
 - B polysaccharide
 - C monomer
 - D polypeptide
- 4 Which of these pairs of molecules are the main components of a membrane?
 - A protein and lipid
 - B cellulose and protein
 - C lipid and glycogen
 - D protein and glycogen
- 5 Which of the following occurs when a dipeptide is formed from two amino acids?
 - A hydrolysis
 - B condensation
 - C oxidation
 - D reduction
- 6 Which of the following statements about enzymes is/are true?
 - i All enzymes have an active site.
 - ii All enzymes are denatured above 37 °C.
 - iii Inhibition of an enzyme is usually lethal to an organism.
 - iv An enzyme is denatured when its primary structure is changed.
 - A i only
 - B i and ii only
 - C i and iii only
 - D i and iv only
- 7 A DNA molecule is made up of deoxyribose, phosphate and bases. What is the largest number of components that deoxyribose is linked to in a DNA molecule?
 - A two phosphates and one base
 - B one phosphate and one base
 - C two phosphates and two bases
 - D one phosphate and two bases

- 8 Transcription is:
- A the copying of a DNA nucleotide sequence to form a duplicate DNA strand
 - B reading of a DNA nucleotide sequence to form an mRNA strand
 - C reading of a DNA nucleotide sequence to form a polypeptide chain
 - D movement of RNA from the nucleus to the cytoplasm
- 9 Which of these statements best describes anaerobic respiration?
- A requires oxygen and produces a large yield of ATP
 - B requires oxygen and produces a small yield of ATP
 - C does not require oxygen and produces a large yield of ATP
 - D does not require oxygen and produces a small yield of ATP
- 10 Which of the following are needed for starch production in a leaf?
- i carbon dioxide
 - ii oxygen
 - iii nitrates
 - iv chlorophyll
- A i, ii, iii and iv
 - B i, ii and iii only
 - C i and iv only
 - D i and ii only