

| CLASS:XI | INDIAN SCHOOL MUSCAT SECOND PERIODIC ASSESSMENT MARKING SCHEME | | SUBJECT: BIOLOGY | | | | | | | | |
|---|--|-------------------|---------------------|---|---|------------------|--------------------|---------|---------|--|---|
| | SET - A | | | | | | | | | | |
| QP.NO. | VALUE POINTS | | SPLIT UP MARKS | | | | | | | | |
| 1. | B] amino acid | | 1 | | | | | | | | |
| 2. | D] i, ii and iv | | 1 | | | | | | | | |
| 3. | D] Quaternary structure of a protein | | 1 | | | | | | | | |
| 4. | D] both A and C | | 1 | | | | | | | | |
| 5. | C] 16 | | 1 | | | | | | | | |
| 6. | <table><tr><th>Anabolic pathways</th><th>Catabolic pathways</th></tr><tr><td>Involve synthesis of simple to complex substances</td><td>Involve synthesis of complex to simple substances</td></tr><tr><td>Energy is stored</td><td>Energy is released</td></tr><tr><td>example</td><td>example</td></tr></table> | Anabolic pathways | Catabolic pathways | Involve synthesis of simple to complex substances | Involve synthesis of complex to simple substances | Energy is stored | Energy is released | example | example | | ½ m for each point. For any two points |
| Anabolic pathways | Catabolic pathways | | | | | | | | | | |
| Involve synthesis of simple to complex substances | Involve synthesis of complex to simple substances | | | | | | | | | | |
| Energy is stored | Energy is released | | | | | | | | | | |
| example | example | | | | | | | | | | |
| 7. | a) Raisins will swell due to entry of water by osmosis. b) No change in raisin size as water neither enter or leave raisin. | | 1 1 | | | | | | | | |
| 8. | Nucleic acid acts as enzymes/ inorganic catalysts withstand high temperature. | | 1+1 | | | | | | | | |
| 9. | As cortex cells are arranged continuously, there is no resistance for movement of water through cell wall and intercellular spaces. Endodermis has casparian thickening which is impervious to water. There they move by symplast. | | 1 2 | | | | | | | | |
| 10. | When the inhibitor closely resembles the substrate in its molecular structure and inhibits the activity of the enzyme, it is known as competitive inhibitor. - Inhibitor completes with substrate for substrate binding site. - Substate cannot bind with enzyme. Results in decline in enzyme function | | 1 1 1 | | | | | | | | |
| 11. | Guttation- loss of water in liquid form. Evaporation is less and root pressure is more. | | 2 1 | | | | | | | | |

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| | SET - B | | |
| QP.NO. | VALUE POINTS | | SPLIT UP MARKS |
| 1. | D] Alanine | | 1 |
| 2. | C] movement of two molecules in the same direction across the membrane | | 1 |
| 3. | B] Glycerol | | 1 |
| 4. | C] In the absence of Fungi, plants will die. | | 1 |
| 5. | B] Ribose and Glucose | | 1 |
| 6. | For any two differences including examples. | | ½ m for each point. For any two points |
| 7. | For any two purposes. | | 2 |
| 8. | Peptide bond. Formed by reaction between Carboxylic acid of one amino acid and Amino group of next amino acid with the elimination of a water molecule. | | 1+1 |
| 9. | Kinetic energy of water molecules. Solute potential and pressure potential | | 1 2 |
| 10. | Explanation of $E + S \rightleftharpoons ES \longrightarrow EP \longrightarrow E + P$ | | 3 |
| 11. | Proper explanation | | 3 |

| | SET - C | |
|--------|---|----------------|
| QP.NO. | VALUE POINTS | SPLIT UP MARKS |
| 1. | C] Aromatic amino acid | 1 |
| 2. | B] Mitochondria | 1 |
| 3. | D) Lecithin | 1 |
| 4. | A] guttation | 1 |
| 5. | B] Apoenzyme | 1 |
| 6. | For any two differences including examples | 2 |
| 7. | Distant movement of substances. Xylem and phloem | 1+1/2 + ½ |
| 8. | Watson and Crick. Nucleoside- phosphate will be absent. Nucleotide- phosphate will be present. | 1+1 |
| 9. | For definition | 1+1+1 |
| 10. | Energy required for biochemical reaction to occur in a cell. Enzymes decreases the activation energy level of a reaction. Explanation with carbonic anhydrase | 1+1+1 |
| 11. | Cohesion – Mutual attraction between water molecules Adhesion – Attraction of water molecules to polar surface Surface tension – Attraction of water to each other in liquid phase to a greater extent than to water in gaseous phase | 1+1+1 |