

Plant physiology is a branch in Botany concerning with the physiological functions or processes of plants. Precisely, it is a descriptive study of variation and structure of plants at the cellular and molecular level leading to ecological, physiological and biochemistry associated viewpoints of plants exploration.

1. In the rainy season, doors get swelled up due to

- (a) Transpiration
- (b) Imbibition
- (c) Diffusion
- (d) Respiration

Answer: (b)

2. This statement regarding enzyme inhibition is correct

- (a) non-competitive inhibitors often bind to the enzyme irreversibly
- (b) non-competitive inhibition of an enzyme can be overcome by adding a large amount of substrate
- (c) competitive inhibition is observed when substrate and inhibitor compete for the active site on enzyme
- (d) competitive inhibition is observed when substrate competes with an enzyme to bind to an inhibitor protein

Answer: (c)

3. In C3 and C4 plants, primary carboxylation takes place with the help of

- (a) PEP carboxylase and pyruvate carboxylase
- (b) RuBP carboxylase and PEP carboxylase
- (c) PEP carboxylase and RuBP carboxylase
- (d) RuBP carboxylase and pyruvate carboxylase

Answer: (b)

4. Peroxisomes are involved in which type of reactions pertaining to plant photosynthesis?

- (a) Calvin Cycle
- (b) Glycolytic cycle
- (c) Glyoxylate cycle
- (d) Bacterial photosynthesis

Answer: (c)

5. The fundamental feature of Kranz Anatomy of C₄ plants is

- (a) Presence of agranal chloroplasts in bundle sheath cells and granal chloroplasts in mesophyll cells
- (b) Presence of granal chloroplasts in bundle sheath cells and agranal chloroplasts in mesophyll cells
- (c) Presence of chloroplasts in epidermal and mesophyll cells
- (d) Presence of agranal chloroplasts in both mesophyll and bundle sheath cells

Answer: (a)

6. The statement which is incorrect with respect to enzyme action is

- (a) Addition of a lot of succinates does not reverse the inhibition of succinic dehydrogenase by malonate
- (b) the substrate binds with the enzyme as its active site
- (c) a non-competitive inhibitor binds the enzyme at a site distinct from that which binds the substrate
- (d) malonate is a competitive inhibitor of succinic dehydrogenase

Answer: (a)

7. A phosphoglyceride is always composed of

- (a) only an unsaturated fatty acid esterified to a glycerol molecule to which a phosphate the group is also attached
- (b) only a saturated fatty acid esterified to a glycerol molecule to which a phosphate group is also attached
- (c) an unsaturated or saturated fatty acid esterified to a phosphate molecule to which a glycerol molecule is also attached
- (d) an unsaturated or saturated fatty acid esterified to a glycerol molecule to which a phosphate group is also attached

Answer: (d)

8. Macromolecule chitin is

- (a) phosphorous containing polysaccharide
- (b) nitrogen containing polysaccharide
- (c) sulphur containing polysaccharide
- (d) simple polysaccharide

Answer: (b)

9. This is a wrongly matched pair

- (a) Alcohol – Nitrogenase
- (b) Detergents – Lipase
- (c) Textile – Amylase
- (d) Fruit juice – Pectinase

Answer: (a)

10. The most abundant protein in the animal world is

- (a) Trypsin
- (b) Collagen
- (c) Haemoglobin
- (d) Insulin

Answer: (b)

