

Class Test (Full Marks 12):

1. Assertion: Lateral meristems are involved in secondary growth in plants.
Reason: Lateral meristems produce secondary xylem and phloem.
2. Assertion: Lysosomes are membrane-bound organelles.
Reason: Lysosome contain digestive enzymes that break down waste and foreign particles.
3. Assertion: Golgi apparatus modifies and packages proteins and lipids.
Reason: Golgi apparatus is responsible for synthesizing proteins and lipids.
4. Assertion: Mitochondria are found only in animal cells.
Reason: Mitochondria generate energy for the cell through cellular respiration.
5. Assertion: Meristematic tissues generally lack vacuoles.
Reason: These tissues undergo rapid cell division and don't need extensive storage.
6. Primary function of smooth endoplasmic reticulum is
 - a) Protein synthesis
 - b) Protein modification
 - c) Lipid synthesis
 - d) Protein transport
7. A cell is experiencing high demand for protein synthesis. Name the organelle would be most active in this process?
 - a) Endoplasmic reticulum
 - b) Ribosomes
 - c) Mitochondria
 - d) Golgi bodies
8. A sudden change occurs in a protein involved in the transport of molecules across the mitochondrial membrane. The cellular process that would be most affected is
 - a) Photosynthesis
 - b) Protein modification
 - c) Protein synthesis
 - d) Cellular respiration
9. A plant's leaves are turning yellow upon its maturation. Because
 - a) Chloroplast is degrading
 - b) Chromoplast is forming
 - c) Both a and b
 - d) Only a
10. A plant's stem is able to grow taller due to the activity of
 - a) Apical meristem
 - b) Lateral meristem
 - c) Intercalary meristem
 - d) Both a and c
11. Meristematic tissues do not need thick cell wall. Justify the statement. (2)

Not a part of evaluation

A plant breeder wants to develop a new variety of plant with increased resistance to drought using knowledge of meristematic tissues. State the steps he could take here.