

Part B - Essay

Instructions

- *Answer four questions only.*
- *Give clear labelled diagrams where necessary.*

(Each question carries 150 marks)

1. Describe the process of synthesis of carbohydrates by the C4 pathway in a Maize plant.
2. (a) What is the heteromorphic alternation of generation?
(b) Describe the process of heteromorphic alternation of generation using the life cycle of *Selaginella* plant.
3. (a) Briefly describe the coronary circulation related to the human heart.
(b) Describe the consequences of blockage of coronary arteries.
4. (a) State basic characteristic of sensory receptors.
(b) Briefly describe the types of sensory receptors found in the human body.
5. (a) Briefly describe the effects of global warming and climate changes.
(b) Briefly describe physical methods of sterilization.
6. Write short notes on the following.
 - (a) Characteristic features of Kingdom Fungi.
 - (b) Fate of the protein synthesized within the cell.
 - (c) Principles of tissue culture.