

[Time: 2½ Hours]

[Marks: 75]

Please check whether you have got the right question paper.

- N.B:
1. Attempt all questions
 2. All questions carry equal marks
 3. Draw neat labelled diagrams wherever necessary

Q. 1 Do as directed (any fifteen)

- i. What is a food chain?
- ii. State any one phenomenon by which water enters the atmosphere.
- iii. What is a pace maker?
- iv. Give the role of salivary amylase in digestion.
- v. Name any one state in which sulphur exists in the atmosphere.
- vi. An example of primary consumer in an ecosystem.
- vii. State any one function of cytokinin in plants.
- viii. Give the function of calyx of kidney.
- ix. Name the gas evolved during photosynthesis.
- x. State any one example of mutualism.

Define the following:

- xi. Ecosystem
- xii. Trophic level
- xiii. Photosynthesis
- xiv. Micturition
- xv. Anaerobic respiration
- xvi. Digestion

Fill in the blanks:

- xvii. _____ is known as the fruit ripening hormone.
- xviii. _____ is the biological electron acceptor in Hill's reaction.
- xix. Light reactions of photosynthesis take place in _____ of the chloroplast.
- xx. _____ is present at the center of the porphyrin ring of chlorophyll.

Q. 2 a) Discuss in detail about non-cyclic electron flow in photosynthesis.

08

b) Elaborate on role of auxins and cytokinins as plant hormones.

07

OR

c) Discuss C₄ cycle in plants.

08

d) Diagrammatically explain structure and function of chloroplast.

07

Q. 3 a) Describe working of human heart.

08

b) Elaborate on composition of blood and function of its constituents.

07

OR

c) Explain the process of digestion in mammals.

08

d) Give an account of structure of haemoglobin and its polymorphism.

07

TURN OVER

- Q. 4 a) Describe Nitrogen cycle in the environment.
b) Explain commensalism with suitable examples.
OR
c) Describe in detail the structure of an ecosystem.
d) Discuss types of ecological pyramids.

Q. 5 Write short notes on any three of the following:

- a. Oxygen cycle
- b. Hills Reaction and its Significance
- c. Parasitism with examples
- d. Structure of Nephron
- e. Glomerular filtrate