

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The mode of nutrition of algae is
 - (a) Autotrophic
 - (b) Heterotrophic
 - (c) Saprophytic
 - (d) Parasitic
2. This organism produces root nodules in leguminous plants
 - (a) Penicillium
 - (b) Rhizobium
 - (c) Clostridium
 - (d) Azotobactor

7. The loss of water in the form of water vapour from aerial plant part is known as
 - (a) Osmosis
 - (b) Transpiration
 - (c) Respiration
 - (d) Photosynthesis
8. The building blocks of proteins are
 - (a) Nucleotides
 - (b) Carbohydrates
 - (c) Aminoacids
 - (d) Lipids
9. Most efficient tissue for the conduction of water in plants
 - (a) Parenchyma
 - (b) Collenchyma
 - (c) Phloem
 - (d) Xylem
10. The ability of a cell to generate a new and entire organism
 - (a) Totipotency
 - (b) Explant
 - (c) Inplant
 - (d) Meristem

3. A phylogenic system of classification refers to the grouping of plants on the basis of
 - (a) Floral similarities
 - (b) Anatomical characters
 - (c) Evolutionary trends
 - (d) Morphological characters
4. The inflorescence of Poaceae is
 - (a) Spikelets
 - (b) Racemose
 - (c) Achene
 - (d) Cyme
5. In neem tree the following parts are medicinally useful
 - (a) Leaf
 - (b) Bark
 - (c) Flowers
 - (d) All the above
6. Rhizome of the following plant is medicinally useful
 - (a) Ginger
 - (b) Vetiveria
 - (c) Solanum
 - (d) Phyllanthus

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b). Each answer should not exceed 250 words.

11. (a) Write about the diagnostic features of fungi.

Or

 (b) Write the salient features of pteridophytes.
12. (a) Explain the economic importance of Poaceae family members.

Or

 (b) Write about the Engler and Prantle's system of classification.
13. (a) Write the botanical name, medicinally useful part and the medicinal uses of tuduvalai.

Or

 (b) Write the importance of Ocimum.
14. (a) Explain the mechanism of stomatal transpiration.

Or

 (b) Write the cyclic electron transport and photophosphorylation in photosynthesis.

15. (a) Describe Mendel's monohybrid cross.

Or

(b) Describe about simple tissues.

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Discuss the salient features of bacteria and viruses.

Or

(b) Describe in detail the economic importance of algae.

17. (a) Describe the important vegetative and floral characters of family cucurbitaceae. Add a note on its economic importance.

Or

(b) Write in detail account on binomial nomenclature.

18. (a) Explain the morphology of the useful part and medicinal uses of phyllanthus emblica.

Or

(b) Write the botanical name, useful part and medicinal uses of vetiver plant.

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19. (a) Describe C3 cycle.

Or

(b) Explain Kreb's cycle.

20. (a) Describe in detail about the structure and functions of chloroplast.

Or

(b) Discuss the enzymes used in gene cloning.

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