

SECTION A

10 × 2 = 20

Note : Answer all questions. Each answer may be limited to 5 lines.

1. Define water potential. What is the value of water potential of pure water?
2. Distinguish between apoenzyme and cofactor.
3. What are pleomorphic bacteria? Give an example.
4. Who proposed the Chromosome Theory of Inheritance?
5. What is the function of the codon-AUG?
6. What are the components of a nucleotide?

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7. Name the nematode that infects the roots of tobacco plants. Name the strategy adopted to prevent this infestation.
8. What is green revolution? Who is regarded as Father of Green Revolution?
9. Why does 'Swiss Cheese' have big holes? Name the bacteria responsible for it.
10. What is Nucleopolyhedro virus being used for nowadays?

SECTION B

6 × 4 = 24

Note : Answer any six questions. Each answer may be limited to 20 lines.

11. "Transpiration is a necessary evil". Explain.
12. Describe in brief photorespiration.
13. Explain the steps involved in the formation of root nodule.
14. Write a note on agricultural/horticultural applications of auxins.
15. Explain the structure of T-even bacteriophages.
16. Mention the advantages of selecting pea plant for experiment by Mendel.

17. What are the differences between DNA and RNA?
18. Give a brief account of Bt cotton.

SECTION C

2 × 8

Note : Answer any two questions. Each answer may be limited to 60 lines.

19. Give an account of glycolysis. Where does it occur? What are the end products?
 20. Give an account of the tools of recombinant DNA technology.
 21. Describe the tissue culture technique. What are the advantages of tissue culture over conventional method of plant breeding in crop improvement programmes?
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