



Total No. of Questions : 21

Total No. of Printed Pages : 2

Regd.
No.

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Part - III
BOTANY, Paper - II
(English version)

Time : 3 Hours]

[Max. Marks : 60

Note : Read the following instructions carefully.

- (i) Answer **all** the questions of **Section-A**. Answer **ANY SIX** questions out of *eight* in **Section-B** and answer **ANY TWO** questions out of *three* in **Section-C**.
- (ii) In **Section-A**, questions from Sl. Nos. **1** to **10** are of *Very short answer type*. Each question carries **TWO** marks. Every answer may be limited to 5 lines. Answer all these questions at one place in the same order.
- (iii) In **Section-B**, questions from Sl. Nos. **11** to **18** are of *Short answer type*. Each question carries **FOUR** marks. Every answer may be limited to 20 lines.
- (iv) In **Section-C**, questions from Sl. Nos. **19** to **21** are of *Long answer type*. Each question carries **EIGHT** marks. Every answer may be limited to 60 lines.
- (v) Draw labelled diagrams wherever necessary for questions in **Sections-B** and **C**.

SECTION - A

10×2=20

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

1. Define Hydroponics.
2. Distinguish between Apoenzyme and Cofactor.
3. What are Pleomorphic bacteria ? Give an example.
4. Explain the terms Phenotype and Genotype.

5. What is the function of the codon - AUG ?
6. In a typical D.N.A. molecule, the proportion of Thymine is 30% of the N bases. Find out the percentages of other N bases.
7. What is down - stream processing ?
8. What is GEAC and what are its objectives ?
9. What are Fermentors ?
10. Give any two microbes that are useful in Biotechnology.

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. Explain the structure of the Chloroplast. Draw a neat labelled diagram.
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.M.V.
16. Mention the advantages of selecting pea plant for experiment by Mendel.
17. What are the differences between DNA and RNA ?
18. What are some bio-safety issues concerned with genetically modified crops ?

SECTION - C

2×8=16

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

19. Explain the reactions of Kreb's cycle.
20. Explain briefly the various processes of recombinant DNA technology.
21. Describe the tissue culture technique and what are the advantages of tissue culture over conventional method of plant breeding in crop improvement programmes.