

227

I

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 Sr. 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 Sr. 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 Sr. 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 the questions. Each answer may be limited to 5 lines.

1. Differentiate osmosis from diffusion.
2. Where does the photolysis of H<sub>2</sub>O occur ? What is its significance ?
3. What is Conjugation ? Who discovered it and in which organism ?
4. Who proposed the chromosome theory of inheritance ?
5. What are the components of a nucleotide ?
6. Write any two chemical differences between DNA and RNA.
7. What are molecular scissors ? Where are they obtained from ?

8. Can a disease be detected before its symptoms appear ? Explain the principle involved.
9. Give *two* examples of fungi used in SCP production.
10. Name any *two* industrially important enzymes.

**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 steps involved in the formation of root module.
13. Write briefly about enzyme inhibitors.
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. Write the important features of Genetic Code.
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 Krebs 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.