

0227

(TS)

B

Total No. of Questions - 21

Total No. of Printed Pages - 2

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No.

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**Part - III**  
**BOTANY, Paper - II**  
**(English Version)**

**Time : 3 Hours****Max. Marks : 60****Note :** Read the following instructions carefully :

- 1) Answer **all** 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'.
- 2) 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** the questions at one place in the same order.
- 3) 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.
- 4) 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.
- 5) 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. What are the components of a transcription unit?
2. What is green revolution? Who is regarded as 'father of green revolution'?
3. What is down-stream processing?
4. Name any two industrially important enzymes.
5. Write briefly on the occurrence of microorganisms.
6. What are apoplast and symplast?

7. What are the physical properties of water responsible for the ascent of sap through xylem in plants?
8. What is the cross between the  $F_1$  progeny and the homozygous recessive parent called? How is it useful?
9. The proportion of nucleotides in a given nucleic acid are : Adenine 18%, Guanine 30%, Cytosine 42% and Uracil 10%. Name the nucleic acid and mention the number of strands in it.
10. How nucleopolyhedroviruses are used in these days?

### SECTION B

6 × 4 = 24

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

11. Write briefly about enzyme inhibitors.
12. Tabulate any four differences between  $C_3$  and  $C_4$  plants.
13. Explain the structure of TMV.
14. Write a short note on seed dormancy.
15. Mention the advantages of selecting pea plant for experiment by Mendel.
16. How many types of RNA polymerases exist in cells? Write their names and functions.
17. List the beneficial aspects of transgenic plants.
18. Write in brief how plants synthesize amino acids.

### 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. Give a brief account of the tools of recombinant DNA (rDNA) technology.
21. You are a Botanist, working in the area of plant breeding. Describe the various steps that you will undertake to release a new variety.