

**227****II**

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 :

- (1) 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.
- (2) In Section – A, questions from Serial 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.
- (3) In Section – B questions from Serial 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 Serial 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**

**Note :** Answer **all** the questions :**10 × 2 = 20**

1. Differentiate osmosis from diffusion.
2. Define the law of limiting factors proposed by Blackman.
3. What are Pleomorphic Bacteria ? Give one example.
4. Explain the terms Phenotype and Genotype.

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5. Who proved that DNA is genetic material ? What is the organism they worked on ?
6. What is meant by Capping and Tailing ?
7. What is Down Stream Processing ?
8. What is GEAC and what are its objectives ?
9. Give two examples of Fungi used in SCP production.
10. What are Fermentors ?

### SECTION – B

**Note :** Answer any six questions :

**6 × 4 = 24**

11. "Transpiration is a necessary evil." Explain.
12. Write in brief how plants synthesize amino acids.
13. Write briefly about Enzyme Inhibitors.
14. Write any four physiological effects of Cytokinins in plants.
15. Explain the structure of TMV.
16. Explain the law of dominance using a monohybrid cross.
17. Write briefly on Nucleosomes.
18. List out the beneficial aspects of Transgenic Plants.

### SECTION – C

**Note :** Answer any two questions :

**2 × 8 = 16**

19. Give an account of Glycolysis. Where does it occur ? What are the end products ?  
Trace the fate of these products in both aerobic and anaerobic respirations.
20. Give a brief account of the tools of recombinant DNA 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.