

**227****II**Total No. of Questions : **21**Total No. of Printed Pages : **2**Regd.
No.

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Part - III
BOTANY - PAPER - II



2043689

(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 Section - B and C.

SECTION - A**Note :** Answer all the questions.**10x2=20**

1. How does guttation differ from transpiration ?
2. Define the law of limiting factors proposed by Blackman.
3. What is transformation ? Who discovered it and in which organism ?
4. Explain the terms phenotype and genotype.
5. What is meant by capping and tailing ? 
6. What are the components of a transcription unit ?
7. How can you differentiate between exonucleases and endonucleases ?
8. Can a disease be detected before its symptoms appear ? Explain the principle involved.
9. What is meant by 'hidden hunger' ? 
10. What is Nucleopolyhedrovirus is being used for now-a-days ?

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**SECTION - B**

Note : Answer *any six* questions.

6x4=24

11. What is meant by plasmolysis ? How is it practically useful to us ?
12. Explain the steps involved in the formation of root nodule.
13. Explain different types of cofactors.
14. Write the physiological responses of gibberellins in plants.
15. Explain the lytic cycle with reference to certain viruses.
16. Explain the Law of Dominance using a monohybrid cross.
17. Write the important features of Genetic code.
18. List out the beneficial aspects of transgenic plants.

**SECTION - C**

Note : Answer *any two* questions.

2x8=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 respiration.
20. Explain briefly the various processes 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.



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