



Total No. of Questions : 21  
Total No. of Printed Pages : 2

Regd.  
No.



**Part - III**  
**BOTANY - PAPER - I**  
(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 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 the questions at one place in the same order.
- (iii) 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.
- (iv) 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.
- (v) Draw labelled diagrams, wherever necessary, for questions in Sections - B and C.



**SECTION - A**

**Note :** Answer all questions.

**10x2=20**

1. Which is the largest botanical garden in the world ? Name a few well known botanical gardens in India.
2. Who is popularly known as father of Botany ? What was the book written by him ?
3. What is the nature of cell-walls in diatoms ? 
4. What is the morphology of cup like structure in Cyathium ? In which family it is found ?
5. Define venation. How do dicots differ from monocots with respect to venation ?
6. What is geocarpy ? Name the plant which exhibits this phenomenon.
7. What is middle lamella made of ? What is its functional significance ? 
8. Given that the average duplication time of E.coli is 20 minutes. How much time will two E.coli cells take to become 32 cells ?



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II

9. Starch, Cellulose, Glycogen, Chitin are polysaccharides found among the following. Choose the one appropriate and write against each.
- (a) Cotton fibre \_\_\_\_\_
- (b) Exoskeleton of cockroach \_\_\_\_\_
- (c) Liver \_\_\_\_\_
- (d) Peeled potato \_\_\_\_\_
10. Define population and community.



### SECTION - B

6x4=24

**Note :** Answer any six questions.

11. What are the characteristic features of Euglenoids ?
12. Differentiate between red algae and brown algae.
13. Distinguish between asexual and sexual reproduction. Why is vegetative reproduction also considered as a type of asexual reproduction ?
14. Write a brief note on semi technical description of a typical flowering plant.
15. Differentiate between Rough Endoplasmic Reticulum (RER) and Smooth Endoplasmic Reticulum (SER).
16. Though redundantly described as a resting phase, interphase does not really involve rest. Comment.
17. State the location and function of different types of meristems.
18. Enumerate the morphological adaptations of hydrophytes.



### SECTION - C

2x8=16

**Note :** Answer any two questions.

19. Define root modification. Explain how root is modified to perform different functions.
20. Describe the process of Fertilization in angiosperms.
21. Describe the T.S. of monocot stem.