

127  
(New Syllabus)



Total No. of Questions - 21

Total No. of Printed Pages - 2

Regd.  
No.

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Part - III

**BOTANY, Paper - I**  
**(Biological Sciences)**  
**(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 five 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 Section 'B' and 'C'.

**SECTION A**

Note : Answer **all** questions. Each answer may be limited to 5 lines.  $10 \times 2 = 20$

1. What is the basic unit of classification? Define it.
2. What do the terms, phycobiont and mycobiont signify?
3. What is palaeobotany? What is its use?
4. Which organ is modified to trap insects in insectivorous plants? Give two examples.
5. Why are certain fruits called false fruits? Name two examples of false fruits.
6. What is omega taxonomy?

7. Which of the following is **not** correct?
  - a) Robert Brown discovered the cell.
  - b) Schleiden and Schwann formulated the cell theory.
  - c) Virchow explained that cells are formed from pre-existing cells.
  - d) A unicellular organism carries out its life activities within a single cell.
8. Give one example each of amino acids, sugars, nucleotides and fatty acids.
9. An anther has 1200 pollen grains. How many pollen mother cells must have been there to produce them?
10. Define population and community.

### SECTION B

Note : Answer **any six** questions. Each answer may be limited to 20 lines.  $6 \times 4 = 24$

11. Give the salient features and importance of chrysophytes.
12. What is meant by homosporous and heterosporous pteridophytes? Give two examples.
13. List the changes observed in an angiosperm flower subsequent to pollination and fertilization.
14. Give the economic importance of plants belonging to Fabaceae.
15. Name two cell organelles that are double membrane bound. What are the characteristics of these two organelles? State their functions and draw labelled diagrams of both.
16. Though redundantly describes as a resting phase, an interphase does not really involve rest. Comment.
17. State the location and functions of different types of meristems.
18. List the anatomical adaptations of hydrophytes.

### SECTION C

Note : Answer **any two** questions. Each answer may be limited to 60 lines.  $2 \times 8 = 16$

19. Define root. Mention the types of root systems. Explain how the root is modified to perform different functions.
20. Describe the process of fertilization in Angiosperms.
21. Describe the transverse section of a dicot stem.