

Total No. of Questions – 21

Regd.

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Total No. of Printed Pages – 2

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 Sl. 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 Sl. 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 Sl. 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** the questions. Each answer may be limited to **5** lines :  $10 \times 2 = 20$ 

1. Give the scientific name of Mango. Identify the generic name and specific epithet.
2. Name two diseases caused by Mycoplasma.
3. Who discovered the cell and what was the book written by him ?
4. What is meant by pulvinus leaf base ? In members of which angiospermic family do you find them ?
5. What are aggregate fruits ? Give two examples.
6. Write the floral formula of solanum plant.

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. Explain the Zwitterionic form of an amino acid.
9. If a tissue has at a given time 1024 cells, how many cycles of mitosis had the original parental single cell undergone ?
10. Climax stage is achieved quickly in secondary succession as compared to primary succession. Why ?

### SECTION - B

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

11. Give a brief account of Dinoflagellates.
12. Differentiate between red algae and brown algae.
13. List the changes observed in angiosperm flower subsequent to pollination and fertilisation.
14. Describe the non-essential floral parts of plants belonging to Fabaceae.
15. Differentiate between Rough Endoplasmic Reticulum (RER) and Smooth Endoplasmic Reticulum (SER).
16. Which division is necessary to maintain constant chromosome number in all body cells of multicellular organism and why ?
17. State the location and function of different types of meristems.
18. Give in detail the anatomical adaptations shown by xerophytes.

### SECTION - C

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

19. Explain how stem is modified variously to perform different functions.
20. With a neat, labelled diagram, describe the parts of a mature angiosperm embryo sac. Mention the role of synergids.
21. Describe the T.S. of monocot stem.