

Total No. of Questions - 26

Regd.

Total No. of Printed Pages - 2

No.

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**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 **Twelve** in Section - **B** and answer any **TWO** questions out of **FOUR** 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** the questions at one place in the same order.
- (iii) In Section - **B**, questions from Sr. Nos. **11** to **22** 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. **23** to **26** 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**

10 × 2 = 20

Note : Answer **ALL** the questions. Each answer may be limited to **5** lines.

1. What is systematics ?
2. How are Viroids different from Viruses ?
3. Why is Mendel considered as the father of Genetics ?
4. What is meant by epipetalous condition ? Give an example.
5. Define placentation. What type of placentation is found in *Dianthus* ?
6. What is Natural system of plant classification ? Name the scientists who followed it.
7. Give the technical description of anthers of *Allium cepa*.
8. What does 's' refer in a 70s and 80s ribosome ?
9. An anther has 1200 pollen grains. How many pollen mother cells must have been there to produce them ?
10. Name the type of land plants that can tolerate the salinities of the sea.

**SECTION - B****6 × 4 = 24**

**Note :** Answer any **SIX** questions. Each answer may be limited to **20** lines.

11. What are the characteristic features of Euglenoids ?
12. Give a brief account of prothallus.
13. Explain binomial nomenclature.
14. Describe the arrangement of floral members in relation to their insertion on thalamus.
15. Describe any two special types of inflorescences.
16. The flowers of many angiospermic plants which show sepals and petals, differ with respect to the arrangement of sepals and petals in respective whorls.' Explain.
17. Give an account of floral diagram.
18. Describe the essential organs of Solanaceae.
19. Describe the cell organelle which contains chlorophyll pigments.
20. Mention the key features of meiosis.
21. What are hydrophytes ? Briefly discuss the different kinds of hydrophytes with examples.
22. Enumerate the morphological adaptations of xerophytes.

**SECTION - C****2 × 8 = 16**

**Note :** Answer any **TWO** questions. Each answer may be limited to **60** lines.

23. Draw the diagram of a microsporangium and label its wall layers. Write briefly about the wall layers.
24. Describe the process of Fertilization in angiosperms.
25. Nucleic acids exhibit secondary structure. Describe through Watson-Crick Model.
26. Describe the T.S. of a dicot stem.