

Total No. of Questions – 21

Total No. of Printed Pages – 2

Regd.

No.

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Part – III
BOTANY, Paper-I
(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 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.
- (3) 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.
- (4) 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.
- (5) Draw labelled diagrams wherever necessary for questions in Sections – B and C.

SECTION – A

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

10 × 2 = 20

1. Define the terms couplet and lead in taxonomic key.
2. What is the principle underlying the use of cyanobacteria in agricultural fields for crop improvement ?
3. Name the different methods of vegetative reproduction in Bryophytes.
4. Define venation. How do dicots differ from monocots with respect to venation ?
5. What is the morphology of cup like structure in cyathium ? In which family it is found ?

6. What is 'Omega Taxonomy' ? www.sakshieducation.com
7. What is middle Lamella made of? What is its functional significance ?
8. What constituents of DNA are linked by glycosidic bond ?
9. An anther has 1200 pollen grains. How many pollen mother cells must have been there to produce them ?
10. Hydrophytes show reduced Xylem. Why ?

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 three strategies that a bisexual chasmogamous flower can evolve to prevent self pollination (autogamy).
14. Describe the essential floral parts of plants belonging to Liliaceae.
15. Describe the structure and function of power houses of cell.
16. Though redundantly described as a resting phase, interphase does not really involve rest. Comment.
17. What is the difference between lenticels and stomata ?
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. Define root modification. Explain how root is modified to perform different functions. Draw neat, labelled diagrams.
20. Describe the process of fertilization in angiosperms. Draw labelled diagrams.
21. Describe the T.S. of monocot stem. Give a neat, labelled diagram of T.S. of monocot stem.