

127**III**

Total No. of Questions – 21

Regd.

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 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 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 Sr. 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. Each answer may be limited to **5** lines :**10 × 2 = 20**

1. Define the terms couplet and lead in taxonomic key.
2. Give the main criteria used for classification by Whittakar.
3. Which group of plants is called vascular cryptogams ? Name the branch of Botany which deals with them.
4. What is the morphology of cup like structure in cyathium ? In which family it is found ?
5. Differentiate between apocarpous and syncarpous ovary.

6. What is "Omega Taxonomy" ?
7. What is the feature of a metacentric chromosome ?
8. 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
9. At what stage of cell cycle does DNA synthesis occur ?
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. Identify each part in a flowering plant and write whether it is haploid (n) or diploid (2n)
 - (a) Ovary _____
 - (b) Anther _____
 - (c) Egg _____
 - (d) Pollen _____
 - (e) Male gamete _____
 - (f) Zygote _____
14. Describe the essential floral parts of plants belonging to Lilliaceae.
15. What are the characteristics of a Prokaryotic cell ?
16. Though redundantly described as a resting phase, interphase does not really involve rest. Comment.
17. What is periderm ? How does periderm formation take place in the dicot stems ?
18. Enumerate the morphological adaptations of hydrophytes.

SECTION – C

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

19. Explain different types of racemose inflorescences.
20. Draw the diagram of a microsporangium and label its wall layers. Write briefly about the wall layers.
21. Describe the internal structure of a dicot root.