

Total No. of Questions – 21

* Regd.

Total No. of Printed Pages – 2

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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 **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 Liliaceae.
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.