

127

III

Total No. of Questions – 21

Total No. of Printed Pages – 2

Regd.

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 :  $10 \times 2 = 20$

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 Lilliacae.
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.