

127**III****Total No. of Questions – 21****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 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.

127 (Day-5)**[1 of 2]****P.T.O.**

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.