

127

II

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 :

- (i) 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.
- (ii) 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.
- (iii) 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.
- (iv) 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.
- (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. ✓ What is the basic unit of Classification ? Define it.
2. ✓ What do the terms Phycobiont and Mycobiont signify ?
3. ✓ Name the books written by Parasara and mention the important aspects discussed in those books.
4. ✓ What is meant by Pulvinus Leaf Base ? In members of which Angiospermic family do you find them ?
5. What is meant by Epipetalous condition ? Give one example.

6. What is Geocarpy? Name the plant which exhibits this phenomenon.
7. What is referred to as Satellite 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. An anther has 1200 pollengrains. 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 a brief account of Dinoflagellates.
12. Differentiate between Liverworts and Mosses.
13. List the changes observed in Angiosperm Flower subsequent to pollination and fertilisation.
14. Describe the essential floral parts of plants belonging to Liliaceae.
15. Differentiate between Rough Endoplasmic Reticulum (RER) and Smooth Endoplasmic Reticulum (SER).
16. Though redundantly described as a resting phase interphase does not really involve rest. Comment.
17. State the location and function of different types of Meristems.
18. Write a brief account on classification of 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.
20. With a neat, labelled diagram, describe the parts of a mature angiosperm embryo sac. Mention the role of Synergids.
21. Describe the T.S. of Dicot Stem.

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.