

0127**A**

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 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

10×2=20

Note :— Answer ALL the questions. Each answer may be limited to 5 lines.

1. What is the basic unit of classification ? Define it.
2. What is Omega taxonomy ?
3. What does 'S' refer in a 70S and 80S ribosomes ?
4. Define population and community.
5. What is meant by pulvinus leaf base ? In members of which angiospermic family do you find them ?

6. Define placentation. What type of placentation is found in *Dianthus* ?
7. 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.
8. What is Palaeobotany ? What is its use ?
9. State *two* economically important uses of heterotrophic bacteria.
10. If a tissue has at a given time 2048 cells, how many cycles of mitosis had the original parental single cell undergone ?

SECTION B

Note :—Answer **ANY SIX** questions. Each answer may be limited to **20** lines.

11. What are the characteristic features of Euglenoids ?
12. What is heterospory ? Briefly comment on its significance. Give *two* examples.
13. Distinguish between asexual and sexual reproduction. Why is vegetative reproduction also considered as a type of asexual reproduction ?
14. Give economic importance of plants belonging to Fabaceae.
15. Write a brief account on classification of xerophytes.
16. Give a brief account of the types of chromosomes based on the position of centromere.
17. A transverse section of the trunk of a tree shows concentric rings. How are these rings formed ? What is the significance of these rings ?
18. Though redundantly described as a resting phase, interphase does not really involve rest. Comment.

SECTION C

2×8=

Note :—Answer **ANY TWO** questions. Each answer may be limited to **60** lines.

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 internal structure of dorsiventral leaf with the help of labelled diagram.