

0127**C**

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 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 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 Section B and Section C.

SECTION A

10×2=20

Note :—Answer ALL questions in 5 lines each :

1. Who is popularly known as father of Botany ? What was the book written by him ?
2. What does ICBN stand for ?
3. What do the terms phycobiont and mycobiont signify ?
4. Define placentation. What type of placentation is found in Dianthus ?
5. Define venation. How do dicots differ from monocots with respect to venation ?
6. Define Alpha taxonomy and omega taxonomy.

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7. Given that the average duplication time of E.coli is 20 minutes. How much time will two E. coli cells take to become 32 cells ?
8. Give *one* example for each of amino acids, sugars, nucleotides and fatty acids.
9. At what stage of cell cycle does DNA synthesis occur ?
10. Define communities. Who classified plant communities into hydrophytes, mesophytes and xerophytes ?

SECTION B

6×4=24

Note :—Answer **ANY SIX** questions in **20** lines each :

11. Give a brief account of Dinoflagellates.
12. What is meant by homosporous and heterosporous pteridophytes ? Give *two* examples.
13. Discuss the various types of pollen tube entry into ovary with the help of diagrams.
14. Describe the non-essential floral parts of plants belonging to Fabaceae.
15. Differentiate between Rough Endoplasmic Reticulum (RER) and Smooth Endoplasmic Reticulum (SER).
16. Give a brief account of the types of chromosomes based on the position of centromere.
17. What is periderm ? How does periderm formation take place in the dicot stems ?
18. Write a brief account on classification of xerophytes.

SECTION C

2×8=16

Note :—Answer **ANY TWO** questions in **60** lines each :

19. Define root modification. Explain how root is modified to perform different functions.
20. Draw the diagram of microsporangium and label its wall layers ? Write briefly about the wall layers.
21. Describe the internal structure of a dicot root.