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I

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 Sr. Nos. 1 to 10 are of very short answer type. Each question carries TWO marks. Each 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 Section B and C.

SECTION A

10×2=20

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

1. Define the terms 'couplet' and 'lead' in taxonomic key.
2. How are viroids different from viruses ?
3. Who is popularly known as 'Father of Botany' ? What was the book written by him ?
4. What type of 'inflorescence' is found in Fig trees ? Why does the insect Blastophaga visits the inflorescence of Fig tree ?

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5. Differentiate actinomorphic from zygomorphic flower.
6. What is geocarpy ? Name the plant which exhibits this phenomenon.
7. What is the significance of vacuole in plant cell ?
8. Which tissue of animals and plants exhibits meiosis ?
9. An anther has 1200 pollen grains. How many pollen mother cells must have been there to produce them ?
10. Climax stage is achieved quickly in secondary succession as compared to primary succession. Why ?

SECTION B

6×4=24

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

11. What are the characteristic features of Euglenoids ?
12. Differentiate between Red Algae and Brown Algae.
13. List the changes observed in angiosperm flower subsequent to pollination and fertilization.
14. Give economic importance of plants belonging to Fabaceae.
15. What are nucleosomes ? What are they made of ?
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. What are hydrophytes ? Briefly discuss the different kinds of hydrophytes with examples.

SECTION C

2×8=16

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

19. Explain different types of racemose inflorescences.
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 a monocot root.