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III

Total No. of Questions : 21
Total No. of Printed Pages : 3

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. Each answer may be limited to 5 lines.

(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 **C**.

SECTION - A **10×2=20**

Note :- Answer all the following questions.

1. How Parasara's Krishi Parasaram and Vriksha Ayurveda are useful in Botany ?

2. What are Fasciculated roots ? Give two examples.

3. What is a Cladophyll ? How does it differ from Phylloclade ?

4. What are the two types of stamens classified depending on their length ?

5. What is Tautonymy ? Give an example.

6. The sequence of Nitrogen bases in one strand of DNA is GCTATGCCATGC. What is the sequence present on opposite strand ?

7. What is Crossing over ? What is its significance ?

8. Define Ecology. Name the scientist who first used the term Ecology.

9. Explain the terms Phenotype and Genotype.

10. What are Mutations ? Who discovered them ?

SECTION - B

6×4=24

Note :- *Answer* ***ANY SIX*** *questions.*

11. Write short notes on false whorl - like inflorescene.

12. Describe the structure of ovule with the help of a neat labelled diagram.

13. Explain the Binomial nomenclature.

14. Describe the structure and function of power-house of a Cell.

15. Write the differences between Mitosis and Meiosis.

16. Describe the structure and functions of Parenchyma.

17. List out the anatomical adaptations of Hydrophytes.

18. What is a Test cross ? Explain with an example. What ratio does it give ?

SECTION - C

2×8=16

Note : *Answer* ***ANY TWO*** *questions.*

19. Write any four leaf modifications with suitable examples and diagrams.

20. Describe the structure of an embryo-sac that is ready for fertilization with the help of well labelled diagram.

21. Explain the structure of Monocot stem as viewed in transverse section.