

Total No. of Questions - 21

Total No. of Printed Pages - 2

Regd.
No.

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Part - III

BOTANY, Paper - II

(English Version)

Time : 3 hours

Max. Marks : 60

Note : Read the following instructions carefully.

- 1) 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'.
- 2) In Section 'A', questions from Sr. 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** these questions at one place in the same order.
- 3) 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.
- 4) 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.
- 5) Draw labelled diagrams wherever necessary for questions in Section 'B' and 'C'.

SECTION A

Note : Answer **all** questions.

10 x 2 = 20

1. Why is spirogyra called 'pond scum' and 'pond silk' ?
2. Define coenocytic hyphae with an example.
3. What is secondary transfusion tissue in cycas ? Mention its function.
4. In which food do you find lactic acid bacteria ? Mention their useful application.

5. Name the metabolic activity of plants which is referred to as 'necessary evil'. Who called so ?
6. What type of soil water is available to plants ? Define it.
7. Name any two blue green algae. Add a note on their importance in rice fields as a bio-fertilizer.
8. Define the turnover number of an enzyme.
9. What is the 'Richmond-Lang effect' ?
10. What is 'emasculatation' ? Mention its importance.

SECTION B

Note : Answer **any six** questions.

6 x 4 = 24

11. Describe the structure of Pteris prothallus.
12. How are bacteria important in agriculture ?
13. Explain the structure of T-even bacteriophages.
14. Explain the cohesion tension theory.
15. Describe the various steps in the development of root nodules in legumes.
16. Tabulate the differences between C_3 and C_4 pathways/plants.
17. Enumerate the applications of the plant tissue culture technique.
18. Write briefly about food values of mushrooms.

SECTION C

Note : Answer **any two** questions.

2 x 8 = 16

19. Describe the internal structure of Funaria capsule.
 20. Explain the respiratory pathway which is common for both aerobic and anaerobic respirations.
 21. Explain the various steps in recombinant DNA technology.
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