

Botany Paper – II

May - 2010

Part III

Time : 3 hours

Max.Marks : 60

Note:- Read the following instructions carefully.

- i. Answer **all** the questions of **Section A**. Answer **anySix** 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 these 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 labeled diagrams wherever necessary for questions in **Section B** and **C**.

SECTION – A

10 X 2 = 20

Note:- Answer **all** the following questions. Each answer may be limited to 5 lines.

1. Define Heterothallism. In which species of Rhizopus it is seen?
2. Why Funaria is considered as a myxohydric moss?
3. What is a Dictyostels? Give an example.
4. Define Botulism. Name the bacterium responsible for botulism.
5. What type of soil water is available to plants? Define it.
6. Define embolism.
7. Define microelements. Give two examples.
8. Define Apoenzyme and Holoenzyme.
9. Name the pigment present in nodules of Legumes and mention its function.
10. Define single cell protein and give two examples.

Section – B

6 X 4 = 24

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

11. Describe the cell structure of Spirogyra.
12. Explain the conjugation in Bacteria.
13. Explain the structure of T-even bacteriophages.
14. 'Transpiration is a necessary evil' – Discuss.
15. Tabulate any eight differences between C₃ and C₄ pathways/Plants.
16. Write any four physiological effects of Auxins.
17. Enumerate the applications of Plant tissue culture technique.
18. Write briefly about food value of Mushrooms.

SECTION – C

2 X 8 = 16

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

- 19.** Describe the internal structure of the leaflet of Cycas and list out the xerophytic adaptations seen in it.
- 20.** Explain the biological reactions of the tricarboxylic acid cycle which occurs in the Mitochondrial matrix.
- 21.** Explain the various steps in recombinant DNA technology.