

Botany Paper – II

May - 2009

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 **SectionB**, 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 **SectionC**, 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. Why *Rhizopus* is called “bread mould” and “black mould”?
2. What are Paraphyses in *Funaria*? Mention their functions.
3. What is Dictyostele? Give an example.
4. Name the antibiotic obtained from *Pencillumnotatum*. Who first time discovered it?
5. What is diffusion? Give two examples of diffusion occurring in plants.
6. Why does the rate of transpiration increase with increase in temperature?
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 enzyme.
9. What is the function of t-RNA I protein synthesis.
10. Name any two bio-pesticides.

Section – B

6 X 4 = 24

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

11. Elucidate the dioecious conjugation in *Spirogyra*. Draw well labeled diagrams.
12. With the help of diagrams, explain the conjugation in Bacteria.
13. Explain the structure of TMV. Draw a labeled diagram.
14. Define ascent of sap and explain.
15. With the help of a diagram, explain the structure of Chloroplast.
16. Define “Respiratory Quotient”. How is it measured? Give RQ values of common food substrates.
17. Enumerate the main objectives of Plant breeding.

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 structure of ovule of *Cycas*. Draw a neat diagram and label it.

20. Describe the nitrogen cycle in detail giving examples.

21. Explain briefly the steps involved in the Tissue Culture.