March - 2009

Part III

Botany Paper – II

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. Define coenocytic hyphae with one example.
2. What is apophysis in *Funaria*? Mention its functions.
3. What is Dictyostele? Give an example.
4. In which food do you find Lactic acid bacteria (LAB)? Mention their useful applications.
5. What type of soil water is available to plants? Define it.
6. Name the metabolic activity of plants which is referred to as 'necessary evil'. Who called so?
7. Name any two blue-green algae. Add a note on their importance in rice fields as bio-fertilizers.
8. Define inductive resonance.
9. What is meant by bolting? Which hormone causes bolting?
10. How does gene cloning technique help in insulin production?

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 structures present external to cell wall in Bacteria.
13. How are viruses classified on the basis of their hosts?
14. Define ascent of sap and explain.
15. What are enzymes? Enumerate the properties of enzymes.
16. Describe various steps in the development of root nodules in legumes.
17. Write short notes on mass selection.
18. Draw a well labeled diagram of L.S. of gill of *Agaricus*.

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. Give the schematic outline of Glycolysis which is common for both aerobic and anaerobic respirations. List the enzymes involved at each step.

21. Explain briefly the steps involved in the tissue culture.