Botany Paper – I - March - 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 **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. What are the group of plants that live as symbionts in Lichens? Name the study of Lichens.
2. Which underground stem modification does not possess roots? Give an example with its scientific name.
3. What is the nature of phyllode in Acacia melanoxylon and Parkinsonia?
4. What are the two types of stamens classified depending on their length?
5. Name the plants of Malvaceae in which epicalyx is absent.
6. Which cell organelle is called suicidal bag of a cell and why?
7. The haploid chromosomes number of a plant is 15. What number is found in pollen grain, zygote, Primary endosperm nucleus and colchicine treated zygote?
8. Define population and community.
9. Explain the terms Phenotype and Genotype.
10. What is crossing over? In which stage of cell division, crossing over occurs? What is its significance?

Section – B 6 X 4 = 24

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

11. Write short notes on single flower like special inflorescence.
12. Explain false fruits with examples.
13. Write a note on ICBN.
14. Describe the structure and function of ‘P ower house of Cell’.
15. Bring out the differences between Mitosis and Meiosis.
16. Which tissue is called as living mechanical tissue? Explain various types of it.
17. Compare hydrophytes and xerophytes.
18. Why did Mendel choose Pea plant for his hybridization experiments?

SECTION – C 2 X 8 = 16

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

19. Describe various types of root modifications.

20. Describe the structure of an Embryosac that is ready for fertilization with the help of neat labeled diagram.

21. Describe the transverse section of Dicot stem.