Botany Paper – I - 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. Who is 'Fa ther of botany' and which book was written by him?
2. Define 'Cauliflory' and give an example.
3. Differentiate between nucleoside and nucleotide.
4. In a cell haploid chromosome number is 15, what number is found in pollen grain, zygote, primary endosperm nucleus and colchicine treated zygote?
5. What are alleles? Give one example.
6. What is the difference between Alpha-Taxonomy and Omega Taxonomy?
7. What is crossing over? What is its significance?
8. Describe the structure of corolla in Fabaceae. What type of aestivation does it show?
9. What is epicalyx? Give scientific name of one plant in which it is present.
10. Define ecosystem. Name the scientist who coined the term ecosystem.

Section – B 6 X 4 = 24

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

11. With the help of well labeled diagrams, write short notes on leaves that help in vegetative reproduction.
12. With the help of well labeled diagrams, give a brief account of living mechanical tissues with examples.
13. With the help of a labeled diagram, write short notes on single flower like inflorescence.
14. Explain false fruits with diagrams and examples.
15. Explain the Law of Segregation and Law of Independent Assortment proposed by Mendel.
16. With the help of a diagram, describe the structure of cell organelle which is responsible for the synthesis of starch.
17. Bring out the differences between Mitosis and Meiosis.
18. List out the anatomical adaptations of Hydrophytes.

SECTION – C 2 X 8 = 16

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

19. With the help of well labeled diagrams and examples, describe various types of root modifications.

20. Describe the development of Angiospermic Embryo sac with the help of neat labeled diagram.

21. Explain the structure of monocot stem as viewed in transverse section. Draw labeled diagrams of Ground plan, sector enlarged.