

Botany Paper – I

June - 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 ecosystem. Name the scientist who coined the term ecosystem.
2. Which underground stem modification does not possess roots? Give an example with its scientific name.
3. What are mutations? Who discovered them?
4. Name the alkaloids obtained from Capsicum frutescens and Nicotianatabacum.
5. Give the scientific name of two plants which store food in their tap roots. How do they differ in their shapes?
6. What is crossing over? What is its significance?
7. Differentiate between nucleotide and nucleoside.
8. What is cell lineage theory? Who discovered it?
9. Define Cauliflory. Give an example.
10. Who is father of Botany? Which book was written by him?

Section – B

6 X 4 = 24

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

11. Write short notes on ICBN.
12. Bring out any four differences between mitosis and meiosis.
13. Why did Mendel choose the pea plant for his experiments? Give any four reasons.
14. Write short notes on a fruit-like inflorescence with a neat labeled diagram.
15. Which tissue secretes water? Describe its structure with a neat diagram.
16. Describe the structure of ovule with the help of neat labeled diagram.
17. List out any four anatomical adaptations of hydrophytes.

18. With the help of a labeled diagram, give an account of the part of the cell which is generally referred to as “Cell brain”.

SECTION – C

2 X 8 = 16

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

19. Describe any four types of stem modifications that are useful for vegetative propagation and draw neat diagram.
20. Describe the transverse section of a dicot stem with labeled diagram.
21. Describe the process of fertilization in angiosperms with labeled diagram.

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