

(3 Hours)

[Total Marks: 100]

- N.B.:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.  
3) Draw neat labelled diagrams wherever necessary.

**Q.1: Attempt Any TWO of the following.** (20)

- Explain the various methods used in study of Ethnobotany.
- Explain the role of traditional medicine in wound healing and ageing.
- Comment on picking and packaging of mushrooms.
- Give the applications of ethnobotany in edible plants.

**Q.2: Attempt any TWO of the following.** (20)

- Explain the steps involved in construction of a Genomic Library.
- Citing an appropriate example, explain the construction of a restriction map.
- Explain the technique of Southern Hybridization.
- Comment on the screening technique of cDNA library.

**Q.3: Attempt any TWO of the following.** (20)

- With the help of a ray diagram, explain the construction and working of UV Spectrophotometer.
- State the principle of Colorimetry? Add a note on its construction and working.
- Explain in brief Molecular Sieve Chromatography.
- Give a general account of Column Chromatography.

**Q.4: Attempt any TWO of the following.** (20)

- Explain the macro and microscopic characters of Clove bud.
- What is the geographic distribution of *Acorus calamus*? Add a note on its chemical constituents.
- Comment on chemical constituents and therapeutic uses of *Senna* leaves. Add a note on common varieties.
- Which are the common varieties of *Curcuma longa*? Add a note on its medicinal uses.

**Q. 5 Write short notes on ANY FOUR of the following** (20)

- Therapeutic uses of *Rubia cordifolia* in skin ailments
- Spawning in mushroom cultivation
- Chromosomal library
- Applications of Ion Exchange Chromatography
- Principle of Partition Chromatography
- Chemical constituents of *Allium sativum*

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