

(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)

- A. What are the various methods of study of Ethnobotany?
- B. Explain the role of traditional medicine in treating fever and diabetes.
- C. Comment on the cultivation of any one edible mushroom studied by you
- D. Write in brief about the application of ethnobotany in ethnomedicine and agriculture.

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

- A. Explain in detail the construction of a Genomic Library.
- B. Citing an appropriate example, explain the construction of a restriction map.
- C. Describe the steps involved in Southern Hybridization technique.
- D. Explain the screening technique of cDNA library.

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

- A. Explain in detail the instrumentation and application of Spectrophotometer.
- B. What is the principle of Colorimetry? Add a note on its working.
- C. Explain in brief about Partition Chromatography.
- D. Write an account of Column Chromatography.

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

- A. What is the geographic distribution and microscopic characters of Clove bud.
- B. Give an account on biological source and macroscopic characters of *Acorus calamus*.
- C. Comment on chemical constituents and therapeutic uses of *Senna* leaves.
- D. Describe the biological source and chemical constituents of *Curcuma longa*.

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

- a. Therapeutic uses of Sandalwood in skin ailments
 - b. Picking and packaging of mushroom
 - c. Chromosomal library
 - d. Applications of Ion Exchange Chromatography
 - e. Principle of Molecular Sieve Chromatography.
 - f. Common varieties of *Allium sativum*.
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