

(3 Hours)

Total Marks: 100

Q.1: Attempt **any TWO** of the following.

- A: Describe the methods of collection of data in Ethnobotany. (10)
- B: What are traditional medicines? Citing suitable example, explain how tribal use them against skin and liver ailments. (10)
- C: Describe the method of harvesting and grading of mushrooms. (10)
- D: Discuss the technique of composting and spawning in cultivation of *Agaricus*. (10)

Q.2: Attempt **any TWO** of the following.

- A: Define genomic library? Describe the construction of a genomic library. (10)
- B: Explain steps involved in southern hybridization. (10)
- C: With an appropriate example, explain construction of restriction map. (10)
- D: Describe the technique of colony hybridization for screening a genomic library. (10)

Q.3: Attempt **any TWO** of the following.

- A: Give a brief account on the principle, working and applications of Spectrophotometer. (10)
- B: Explain the principle and working of molecular sieve chromatography (10)
- C: What is ion-exchange chromatography? Add a note on types of resins used in it. (10)
- D: Briefly explain the principle and working of adsorption chromatography. (10)

Q.4: Attempt **any TWO** of the following.

- A: Describe the biological source, macroscopic and microscopic characters of *Strychnos* seed. (10)
- B: Define the term Monograph. Write an account on biological source, macroscopic and microscopic characters of *Acorus calamus*. (10)
- C: Write an account on chemical constituents and therapeutic uses of *Allium sativum*. (10)
- D: Describe the biological source, geographical distribution, common varieties and therapeutic uses of *Curcuma longa*. (10)

Q.5 Short notes (**Attempt any four**) (20)

- Toxic plants and antidotes
- Chromosomal library
- Radioactive labeling of DNA
- Working of Colorimeter.
- Chemical constituents of *Senna* leaf.
- Therapeutic uses of Clove bud.
