

(3 Hours)

[Total Marks: 100]

- N.B.** 1. All questions are **compulsory**.  
2. **Draw** neat labelled **diagrams** wherever **necessary**.  
3. All questions carry **equal** marks.

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**Q.1 Attempt any two** **20**

- a Give an account of applications of Ethnobotany with reference to edible plants, toxic plants and antidotes.
- b With suitable examples, describe the role of traditional medicine in wound healing and ageing.
- c Describe the cultivation of any one mushroom studied by you
- d Give an account of nutritional value and economic importance of mushrooms.

**Q.2 Attempt any two** **20**

- a Define and compare genomic library, chromosomal library and c-DNA library.
- b Describe the steps involved in screening specific c-DNA sequences from a c-DNA library using an antibody probe.
- c What is restriction mapping? Explain with an appropriate example, construction of a restriction map
- d Describe the steps involved in southern hybridisation for analysing cellular DNA.

**Q.3 Attempt any two** **20**

- a Explain the principle and working of Adsorption chromatography
- b Describe the various components of colorimeter and their role.
- c What is Ion Exchange Chromatography? Add note on types of resins used in it
- d Define Chromatography. Explain the principle and working of Partition chromatography

**Q.4 Attempt any two** **20**

- a Describe macro & microscopic characters, chemical constituents and adulterants of the *Allium Sativum*
- b Explain the biological source, macro and microscopic characters and Therapeutic uses of Clove bud
- c Give an account biological source, chemical constituents and therapeutic uses of Senna leave.
- d Describe biological source, common verities, macro and microscopical characters and therapeutic uses of *Curcuma longa*.

**Q.5 Attempt any four** **20**

- a Traditional medicines.
- b Grading and packaging of mushrooms
- c Restriction enzymes
- d Applications of spectrophotometer
- e Uses of column chromatography
- f Medicinal values of Clove buds