(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

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