

Time – 3 hrs.

Marks -100

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

Q.1 Attempt any two

20

- a Explain methods of study in Ethnobotany.
- b Give an account of applications of Ethnobotany with reference to edible plants, toxic plants and antidotes.
- c What are traditional medicines? Citing suitable examples, explain how tribal use them against skin and liver ailments.
- d Discuss the technique of composting and spawning in cultivation of *Agaricus* (mushroom).

Q.2 Attempt any two

20

- a What is genomic DNA library? Describe the steps involved in its construction.
- b Describe the steps involved in screening a c-DNA library made using appropriate plasmid vector.
- c Describe the identification of genes in library using complementation of mutation.
- d What is restriction mapping? Explain with an appropriate example, construction of a restriction map.

Q.3 Attempt any two

20

- a Explain the principle and working of Molecular sieve chromatography.
- b Define Chromatography. Explain the principle and types of partition chromatography.
- c Explain in detail the principle, working and applications of a spectrophotometer.
- d Describe working and principle of Ion Exchange Chromatography.

Q.4 Attempt any two

20

- a Describe macro & microscopic characters, chemical constituents and adulterants of the Clove buds.
- b Define Monograph of drugs. Explain the biological source, macro and microscopic characters of *Strychnos nux-vomica* seeds.
- c Give an account of biological source, chemical constituents and therapeutic uses of *Acorus calamus*.
- d Describe biological source, macro and microscopic characters and therapeutic uses of *Allium sativum*.

Q.5 Attempt any four

20

- a Write a note on Ethnomedicine
- b Give the therapeutic uses of *Curcuma longa*.
- c Comment on the economic importance of mushroom cultivation
- d Briefly describe about chromosome library
- e Give the applications of column chromatography
- f Describe the adulterant of Senna leaves