16/11/2018

Paper / Subject Code: 24267 / Botany: Current Trends in Plant Sciences II

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 method of collection of data in Ethnobotany.

b With respect to Ethnomedicine and famine related plants, explain the applications of Ethnobotany.

c Citing suitable examples, explain the role of traditional medicine in treating fever and diabetes.

d Give an account of nutritional value and economic importance of mushrooms.

Q.2 Attempt any two **20**

a What is c-DNA library? Describe the steps involved in its construction.

b Describe the technique of colony hybridization for screening a genomic DNA library.

c What is restriction mapping? Explain with an appropriate example, construction of a restriction map.

d Describe the steps involved in Southern hybridization for analyzing cellular DNA.

Q.3 Attempt any two **20**

a What is Ion Exchange Chromatography? Add note on types of resins used in it.

b Define Chromatography. Explain the principle and types of partition chromatography.

c Explain in detail the principle, working and applications of colorimeter.

d Describe the working and principle of Molecular sieve chromatography.

Q.4 Attempt any two **20**

a Describe macro & microscopic characters, chemical constituents and adulterants of the Senna leaves.

b Define Monograph of drugs. Explain the biological source, macro and microscopical characters of Clove bud.

c Give an account of biological source, chemical constituents and therapeutic uses of *Curcuma longa.*

d Describe biological source, common varieties, macro and microscopical characters and therapeutic uses of *Allium sativum.*

Q.5 Attempt any four **20**

a Comment on the applications of Ethnobotany in Agriculture

b Give the chemical constituents of *Acorus calamus.*

c Write a note on spawning of mushroom

d Comment on chromosome library

e Give the applications of adsorption chromatography

f Comment on the therapeutic uses *Strychnos nux-vomica* seeds