

SET-B
B.Sc. Life Science/ Sem VI
(Paper Title: Economic Botany and Biotechnology)

Unique Paper Code: 42167901

Department Code: 216

C.No: DSE

Time: 3 Hours+ 1hour

Maximum Marks: 75

(Write your University Roll Number and Paper Title & Code on top of the Answer Sheet)

Attempt any four questions in all. All questions carry equal marks.

1. 'Spices have played an important role in shaping the history and economy of our country'. Justify the statement. Choose any two spices (one from Piperaceae and one from Myrtaceae family) and give their common names, botanical names, botany of the part used and list their medicinal and economic uses. Draw well labelled diagrams of both the spices.
2. What are non-alcoholic beverages? Mention the botanical names of the plants, their families and the parts used for making such beverages. Give a detailed account of areas and method of cultivation, active components, processing and uses of any one non-alcoholic beverage consumed most in our country.
3. List the differences between vegetable oils and essential oils. Write a short note on fatty oils and give botanical names and families of some common fatty oil producing plants. Describe the extraction methods and commercial uses of Groundnut.
4. Diseases caused by nutritional deficiency can be overcome by using food and food products developed using Recombinant DNA Technology and transgenic technologies. Explain the technique in detail using Golden Rice and GM Potato as examples.
5. Discuss the infrastructure and equipment requirements for setting up a Plant Tissue Culture Laboratory. How do we grow triploid plants and why are triploids considered important in floriculture and horticulture?
6. Discuss the role of any three gene cloning vectors. What is Southern Blotting? With the help of suitable diagrams explain the technique and give the applications.