

M. PHARMACY FIRST YEAR SECOND SEMESTER - 2025

Subject: MEDICINAL PLANT BIOTECHNOLOGY

Time: 3 hours

Full marks: 75

(Answer any 5 questions)

1. Discuss the basic ingredients of plant tissue culture media. Discuss the types of cell suspension culture. Explain the growth pattern curve of cell suspension culture. 15
2. Write notes on (any two) 7.5 x 2 = 15
 - a. Callus culture
 - b. In vitro conservation
 - c. Applications of plant tissue culture
3. What is recombinant DNA technology? Discuss the methods involved in recombinant DNA technology. 15
4. Discuss the importance of risk analysis in the context of recombinant DNA technology. Explain the key considerations and methodologies used in assessing and managing risks associated with this technology. 15
5. Write notes on (any two) 7.5 x 2 = 15
 - a. Production of single-cell proteins
 - b. Transgenic plant
 - c. Bioreactor
6. Write down the applications of biotechnology in the industrial production of enzymes: 15
7. Discuss the prospects of plant biotechnology. Explain the importance of hairy root culture in the production of plant secondary metabolites. 15