

B. Pharm. 2nd Year, 2nd Semester Examination 2024

Subject: Pharmacognosy and Phytochemistry I

Time: 3 hours

Full marks: 75

(Answer any 5 questions taking at least 2 from each group)

Group – A

1. Define volatile oils. Why they are called essential oils? Discuss the physicochemical properties of volatile oil. Write down different methods of extraction of volatile oils and individual terpenes. How will you ensure the presence of volatile oil in crude drugs? 15
2. What do you mean by 'explant' and 'totipotency'? Write down different techniques of in vitro conservation of plants. What are the major applications of plant tissue culture? 15
3. Write notes on
 - a) Surface sterilization of explants
 - b) Callus culture
 - c) Basal media for plant tissue culture
 - d) Elicitation
 - e) Splitting and Passaging15
4. Discuss the terms 'Dedifferentiation' and 'Redifferentiation'. Discuss different types of plant cell suspension cultures. Explain the growth characteristics in a plant cell suspension culture. How will you detect viable cells in a plant cell suspension culture? Discuss the general protocol of hardening and acclimatization of in vitro derived plants. 15

Group – B

5. Define organize and unorganize drug with examples. How will you distinguish organize and unorganized drug? How will you protect the plant in cultivated area? 15
6. Write the scheme of Pharmacognostic study of the crude drug. 15
7. Discuss the various factors which effect the cultivation of medicinal plants. 15