

- 1.(a) Describe the microscopical characters of (6)
(i) Rauwolfia (ii) Nuxvomica
- (b) Give the chemical constituents and uses of (8)
(A) Vinca (B) Ephedra (C) Cinchona
- OR**
- (c) Define and classify alkaloids with examples. (5)
- (d) Write the sources, chemistry and therapeutic properties of opium and tobacco. (9)
- 2.(a) Write the Biological source, chemistry and therapeutic uses of Digitalis and (10)
ashwagandha.
- (b) Describe the microscopy of Senna. (4)
- OR**
- (c) Define and classify glycosides with examples. (6)
- (d) Give the sources, chemistry and mechanism action of any two drugs (8)
containing glycosides.
- 3.(a) Write the sources, chemistry and uses of (9)
(i) Cinnamon (ii) Turmeric (iii) Asafoetida
- (b) Define and classify Resin with examples. (5)
- OR**
- (c) Describe the isolation and estimation of quinine from cinchona. (6)
- (d) Discuss the chemistry and therapeutic properties of podophyllum and (8)
pyrethrum.
- 4.(a) Discuss the industrial application of plant tissue culture technique. (6)
- (b) Classify the culture technique. Explain the process of immobilization (8)
technique with application.
- OR**
- (c) Explain the process of organogenesis. (6)
- (d) Surface sterilization techniques. (4)
- (e) Macro supplements used in culture media. (4)
- 5.(a) Write note on quality control of raw materials. (7)
- (b) Give preparation of Aswas and Ghritans. (7)
- OR**
- (c) Discuss the traditional systems of medicines practised in India and give their (7)
significance.
- (d) Give an informative note on discovery of new drugs from natural sources. (7)
