

[Time: 3 hours]

[Marks 70]

NB: 1. All questions are compulsory

2. Figures to the right indicate full marks

- 1 a. With the help of free energy equation comment on their thermodynamic stability of dispersed systems. 3
b. Classify penetration enhancers. Give examples. 2
c. Enlist various factors affecting rectal absorption of drugs. Explain any one. 3
d. Explain the need for various blood products. 2
e. Comment on the quality control tests for sutures. 3
f. Discuss pharmaceutical applications of suspensions. 2
- 2a. Discuss large scale manufacturing of suspensions. 4
- OR**
- What are the different quality control tests for emulsions? Explain any two in detail.
- b. Enlist different suppository bases. Elaborate on macragol as suppository base. 4
c. Comment on the use of non-absorbable sutures. 3
- 3a. Explain DLVO theory in detail. 4
b. Write a note on plasmapheresis 4
- OR**
- Write a note on fractionation of plasma.
- c. Describe any one quality control test for suppositories. 3
- 4a. Discuss different raw materials used in preparation of gels. 4
b. Elaborate on HLB and Davis method used for selection of emulsifiers. 4
c. What are the ideal properties of plasma substitutes? 3
- OR**
- Write a note on HETA starch as a plasma substitute.
- 5a. Discuss formulation additives used for preparation of suspensions. 4
b. Enlist quality control tests of semisolids and explain any two. 3
c. Elaborate on any two problems faced during manufacture of suppositories using cocoa butter as base. 4
- OR**
- Give an account of large scale manufacturing of suppositories.
- 6a. Explain in brief sterilization of catgut. 3
b. Elaborate on formulation additives in emulsions justifying the role of each. 4
- OR**
- Comment on cracking and creaming phenomena observed in emulsions.
- c. Discuss physiological factors affecting skin penetration. 4
