

[Time: 3 hours]

[Marks 80]

- NB: 1. All questions are compulsory
2. Figures to the right indicate full marks

- 1 a. Classify dispersed systems. Comment on role of surface free energy in suspension stability. 3
b. Comment on physiological factors affecting skin penetration. 2
c. Enlist desirable features of suppositories. Give disadvantages of suppositories as dosage forms. 3
d. Discuss problems/hazards involved in handling of blood products. 2
e. Enlist the various quality control tests on ligatures. Discuss tensile strength determination of catgut. 3
f. Discuss pharmaceutical applications of emulsions. 2

- 2a. Enlist various quality control tests for suspensions. Elaborate with suitable diagram large scale manufacturing of suspensions. 4

OR

Enlist various quality control tests for emulsions. Elaborate on any one equipment used in emulsion production.

- b. Enlist properties of an ideal suppository base. Elaborate on any one suppository base. 4
c. Explain and classify non-absorbable sutures. Elaborate on any one non-absorbable suture of natural origin. 3

- 3a. Explain the following (i) DLVO Theory (ii) Schulze Hardy Rule 4

- b. Discuss Plasmapheresis 4

OR

Discuss Gamma Globulin preparations.

- c. Enlist various Quality control tests for suppositories. Explain any one test. 3

- 4a. Discuss salient features of raw materials used in semisolid preparations. 4

- b. Classify Emulsifying agents. Explain selection of emulsifier by HLB method. 4

- c. What are plasma volume expanders? Discuss the salient features of plasma volume expanders with suitable examples. 3

OR

Discuss steps involved in production of clinical grade Dextran in brief.

- 5a. Enlist various methods for preparation of suspensions. Explain any one method in detail. 4

- b. Explain large scale manufacturing of any one semisolid preparation. 3

- c. Explain salient features of Theobroma oil as a suppository base. 4

OR

Describe any two large scale manufacturing techniques of suppositories.

- 6a. Discuss manufacturing and processing of catgut. 3

- b. Elaborate on physical stability of emulsions. 4

OR

Elaborate on preservation of emulsions.

- c. Classify Penetration enhancers with examples. Discuss any two methods to evaluate skin penetration. 4
