

(3 Hours)

Total marks 80

N.B. (1) All questions are compulsory.

(2) Figure to be right indicate full marks.

(3) Draw neat labelled diagram wherever applicable

1. (a) Write importance of pre-formulation. 2
- (b) Write in brief about adhesives and Printing ink. 2
- (c) Explain the importance of polymorphism during preformulation study of monophasic liquids. 2
- (d) Explain in brief impellers used in liquid mixing. 2
- (e) Enlist fundamental and derived properties of powders. 2
- (f) Write in brief about the quality control parameters of powders. 4
- (g) Differentiate between absorbable and non-absorbable sutures. 2
- (h) Write a note on fractionation of plasma by Cohn's technique. 4
2. (a) Enlist methods to prepare syrup and write in detail any two methods. 4
- (b) Enlist the techniques of particle size analysis and explain Andreasen pipette method. 4
- OR**
- Give an account of any one particle size reduction mill which works on principle of combined impact and attrition.
- (c) Classify sutures and elaborate on manufacturing of catgut. 4
3. (a) Give brief account of development of pharmacy profession in India. 2
- (b) Discuss the large scale filling operation for liquid dosage forms. 4
- OR**
- Write the quality control tests for monophasic liquid dosage form.
- (c) Write in brief about formulation of reconstituted powders. 4
- (d) Explain the need of blood banking. 2

- 4. (a) What is pharmacopoeia and write about International pharmacopoeia. 2
- (b) Discuss in brief plastic as primary packaging material. 4
- (c) Explain the techniques for determination of particle surface area. 4
- (d) Give advantages and limitations of silk as a suture. 2

- 5. (a) Write in brief about solubility and discuss any one solubilisation technique. 4
- (b) Justify, talc should be sterilized before addition to aromatic water. 2
- (c) Explain any one equipment for powder mixing. 2
- (d) Explain plasmapheresis in detail. 4

OR

Write the quality control tests for blood products.

- 6. (a) Define and classify dosage form. 2

OR

Write a note on alternate systems of medicines with reference to Ayurveda.

- (b) Explain various factors affecting rate of filtration. 4
- (c) Explain size separation by sieving. 2
- (d) Elaborate on dextran as plasma volume expander. 4
