

(3 Hours)

(Total Marks: 80)

- N.B: (1) All questions are **compulsory**.  
 (2) **Figures** to the **right** indicate full marks  
 (3) Draw neat labeled diagram whenever applicable

1. (a) Give physiological consideration for parenteral route of administration 2  
 (b) Define tamper proof packaging and give examples 2  
 (c) Define- Partition coefficient, Polymorph 2  
 (d) Differentiate between elixir and linctus 2  
 (e) Give applications of mixing process 2  
 (f) Write in brief about conductivity method in particle size analysis 4  
 (g) Discuss synthetic non-absorbable sutures 2  
 (h) Write in brief on HETA starch 4
  
2. (a) Elaborate on construction and working of paddle mixers 4  
 (b) Give an account of a size reduction mill which works on principle of impact. 4  

**OR**

 Explain Cyclone Separator equipment for size separation.  
 (c) Discuss blood coagulation factors 4
  
3. (a) Give brief overview of global status of Indian Pharmaceutical Industry 2  
 (b) Discuss factors affecting filtration 4  

**OR**

 Comment on excipients for monophasic liquids  
 (c) Elaborate on dusting powder formulation 4  
 (d) Classify sutures and ligatures 2
  
4. (a) Write a note on USP/NF 2  
 (b) Write a note on metal as a packaging material 4  
 (c) Explain method to determine flow property of powders. 4  
 (d) Explain plasmapheresis 2
  
5. (a) Describe working of rotary filter 4  
 (b) Elaborate on quality control test for monophasic liquids 2  
 (c) Explain any one equipment for powder mixing. 2  
 (d) Comment on quality control of catgut 4  

**OR**

 Explain labeling and storage of whole human blood
  
6. (a) Define and classify dosage forms 2  

**OR**

 Write a note on alternative systems of medicine with respect to Homeopathy.  
 (b) Write a note on different methods of preparing syrup. 4  
 (c) Define Carr's Index and give its significance. 2  
 (d) Elaborate on manufacture of dextran 4