

- N.B.** (1) All questions are compulsory.
 (2) Figures to the right indicate full marks.

1. (a) Explain the need for dosage form. 2
 (b) Define the terms absorption and distribution. 2
 (c) How much quantity of alcohol is required to prepare 250 ml of 60% v/v alcohol? 1
 (d) Define relative viscosity. 1
 (e) What are syrups? Explain any two methods for preparation of syrups. 4
- OR**
- (e) What are aromatic waters? Explain the preparation methods of aromatic waters. 4
 (f) Give reason: Ampicillin trihydrate paediatric formulation is formulated as dry syrup. 2
 (g) Discuss the applications of complexation in formulation of pharmaceuticals. 2
 (h) Define dissolution rate. 1
2. (a) Discuss the advantages and limitations of oral route of drug administration. 3
 (b) Give an account of Ayurveda as an alternate system of medicine. 2
 (c) Explain the micellization technique for solubilization of drugs. 2
 (d) What is primary packaging? Explain the advantages and limitations of glass as a packing material. 3
 (e) Enlist the methods used for analysis of complexes. 1
3. (a) Give the GMP requirements for personnel in manufacturing area. 2
 (b) Differentiate between Newtonian and Non Newtonian flow. 2
 (c) Describe the working of Propeller mixers. 2
 (d) Enumerate different methods used for particle size measurement and explain any one in detail. 4
 (e) State Fick's Second law of diffusion. 1

Con. 5788-DC-2048-13.

2

4. (a) Define (any three) :— 3
- (i) Elixir
 - (ii) Liniment
 - (iii) Ointment
 - (iv) Effervescent granules.
- (b) An IV injection contains 8% w/v of mannitol. How many ml of injection should be administered to provide a patient with 50 grams of mannitol ? 2
- (c) Give the advantages and limitations of water as a vehicle for preparation of monophasic liquids. 2
- (d) Explain the principle of particle size separation using cyclone separator. 2
- (e) State the Noyes-Whitney equation and Hixson-Crowell equation. 2
5. (a) Give a brief overview of history of Pharmacy profession in India. 2
- (b) Explain any one technique used for the measurement of flow of non-Newtonian fluids. 2
- (c) Explain the terms filtration and clarification. What are the factors affecting filtration rate ? 3
- (d) Enlist different methods used for size reduction. Explain the principle, construction and working of ball mill OR fluid energy mill. 4
6. (a) Write a note on development of Indian Pharmacopoeia. 3
- (b) Define the terms bioavailability and dose response. 2
- (c) Give an account of packing material used for packaging of liquids. 4
- (d) What are the different types of mixers used for powder mixing ? 2