

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.Ph. / M. Ph. / D.Ph. - SEMESTER-I • EXAMINATION – WINTER-2016**

**Subject Code: 410001****Date: 20/10/2016****Subject Name: Pharmaceutics I****Time: 10:30 AM TO 01:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What do you mean by novel drug delivery systems? Discuss their advantages. Write a short note on Special carrier system for targeting drugs. **06**
- (b) What is the significance of pharmacopoeia? Write a short note on IP. **05**
- (c) Define the term 'metrology'. Which systems have been used by the pharmacists to weigh and measure ingredients? **05**
- Q.2** (a) Define size reduction. Discuss its objectives and various factors affecting size reduction. **06**
- (b) Discuss the principle, construction, working, advantages, disadvantages and applications of Ball mill. **05**
- (c) Compare glass and plastic as packaging materials for pharmaceutical products. **05**
- Q.3** (a) Define mixing. Discuss its objectives. Discuss different types of mixtures giving suitable examples. **06**
- (b) Discuss the principle, construction, working, advantages, disadvantages and applications of Colloid mill. **05**
- (c) Discuss cyclone separator as separation equipment. **05**
- Q.4** (a) Discuss various factors affecting the rate of filtration. Write a short note on Filter aids. **06**
- (b) Discuss Soxhlet extraction process in detail. **05**
- (c) Define percolation. What are the factors affecting the efficiency of drug extraction for organized drugs. **05**
- Q.5** (a) Define evaporation. Discuss the various factors affecting evaporation. **06**
- (b) Discuss Stoke's still for preparation of Purified water I.P. **05**
- (c) Discuss Fluidized bed dryer as drying equipment used in pharmaceutical industry for drying of various substances. **05**
- Q.6** (a) List the various types of distillation. Why condensers are used in upright or oblique position? Discuss various types of condensers. **06**
- (b) What is slugging method of tablet preparation? What are its advantages over wet granulation method? **05**
- (c) Enumerate various test used for quality control of tablets. How can you evaluate tablets for Disintegration time and friability? **05**
- Q.7** (a) Define sterilization. Classify various methods of sterilization. Discuss autoclave as a method of sterilization. **06**
- (b) Give the advantages and disadvantages of capsules. Discuss rotary die process for preparation of capsules. **05**
- (c) Differentiate between active immunity and passive immunity. How can you prepare Diphtheria vaccine? **05**

