

**S.Y.B.PHARM. SEMESTER-IV (2011 COURSE) : WINTER -  
2017**

**SUBJECT : DOSAGE FORM DESIGN – I**

Day : **Thursday**  
Date : **16/11/2017**

**W-2017-3827**

Time : **02.00 PM TO 05.00 PM**  
Max. Marks : **80**

**N.B.:**

- 1) **Q.No.1 and Q.No.5 are COMPULSORY.** Out of the remaining questions attempt **ANY TWO** questions from each section.
- 2) Answers to both the sections should be written in the **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.

**SECTION – I**

- Q.1** Answer **ANY FIVE** of the following: **[10]**
- a) What are the general rules for solubility of inorganic molecules?
  - b) What is surface free energy?
  - c) What is zeta potential?
  - d) What do you mean by polymorphism?
  - e) Give pharmaceutical application of suspension.
  - f) Describe antioxidants used in oral liquids.
- Q.2** a) Discuss in detail additives used in solutions for internal use. **[08]**  
b) Discuss in detail aggregation and cake formation in suspension. **[07]**
- Q.3** a) Discuss in process quality control (IPQC) for monophasic liquids. **[08]**  
b) Explain how the flow property of a drug substance is measured and mention its importance in formulation development. **[07]**
- Q.4** Write short note on **ANY THREE** of the following: **[15]**
- a) Physical stability of suspension
  - b) Microbial contamination in non-sterile products
  - c) Crystal characteristics and bioavailability
  - d) Controlled flocculation in suspension

**SECTION – II**

- Q.5** Answer **ANY FIVE** of the following: **[10]**
- a) What are disadvantages of suppositories?
  - b) How effective concentration of preservatives for emulsions be calculated?
  - c) Enlist the parameters for evaluation of dry syrup.
  - d) What are IPQC tests in emulsions preparation?
  - e) Explain conductivity test for emulsion.
  - f) Give example of two protein based drugs.
- Q.6** a) Discuss physical and chemical stability of proteins and write about its stabilization. **[08]**  
b) Discuss methods for preparation of suppositories. **[07]**
- Q.7** a) Explain instabilities of emulsion. **[08]**  
b) Discuss processing and layout for dry syrup manufacturing. **[07]**
- Q.8** Write short note on **ANY THREE** of the following: **[15]**
- a) Methods for manufacture emulsion
  - b) Evaluation of suppositories
  - c) Electrical factors in emulsion stability
  - d) Microemulsion