



**NF-02011264**

Seat No. \_\_\_\_\_

**M. Pharm. (Sem. I) (CBCS) Examination**

**January – 2017**

**Pharmaceutical Preformulation : Paper - I**

*(Multidisciplinary/Elective)*

Time : **3** Hours]

[Total Marks : **80**

- Instructions :
- (1) Answer any three from each section except question 1 and 5 are compulsory.
  - (2) Figure to the right indicates marks.
  - (3) Draw neat and clean diagrams as required.

**SECTION - I**

- 1** Answer any seven out of given 10 questions : **2×7=14**
- (a) Enumerate the methods for particle size reduction.
  - (b) What do you mean by BCS Classification system.
  - (c) Define Polymorphism.
  - (d) Give difference between Amorphous and crystalline forms.
  - (e) Define Partition coefficient.
  - (f) What do you mean by pka.
  - (g) What is drug excipient compatibilities studies.
  - (h) Define: dissolution.
  - (i) What is bulk density.
  - (j) What do you mean by ICH Guidelines.
- 2** Answer the following :
- A. Discuss in detail about the methods to increase the solubility of drug. **7**
  - B. Write a note on Polymorphism. **6**

- 3 Answer the following :
- A. Defin, objective, goals and criterias of preformulation studies. 7
  - B. Discuss in detail about pharmaceutical solid polymorphism. 6
- 4 Answer the following :
- A. Discuss the various methods to determine partition coefficient of drug. 7
  - B. Write a note on pharmaceutical salt form. 6

## SECTION - II

- 5 Answer any two out of three : 7×2=14
- (a) Write a note on methods for evaluation of solid state.
  - (b) Discuss characterization of Phytomedicine.
  - (c) Describe in detail about solid state properties.
- 6 Answer the following
- A. Write a note on phase solubility analysis. 7
  - B. Discuss partitioning of Acid and Base in Biological membrane. 6
- 7 Answer the following
- A. Discuss the influence of particle size in the formulation of dosage forms. 7
  - B. Write a note in brief regarding ionization and lipophilicity of drug. 6
- 8 Answer the following :
- A. Discuss in brief about factors affecting dissolution Rate. 7
  - B. Write a note on freeze dried products. 6
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