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Roll No

PY - 202**B.Pharmacy II Semester**

Examination, June 2015

Pharmaceutics-II (Physical Pharmacy)*Time : Three Hours**Maximum Marks : 70*

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each questions are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

1. a) What is significance of particle size distribution in micromeritics?
- b) What are derived properties of powders?
- c) Discuss methods for determination of particles size.
- d) Discuss derived properties of powders with pharmaceutical applications.

OR

Discuss theories of emulsification.

2. a) What do you mean by phase rule?
- b) What are different ways to express solubility?
- c) Discuss factors affecting solubility of gases in liquids and liquids in liquids.
- d) Describe extended Hildebrand solubility approach. Discuss the effects of solvents, pH, surfactants, hydrotropic agents on solubility of drugs.

Classify complexes and discuss their pharmaceutical applications.

3. a) What is difference between surface tension and interfacial tension?
- b) Brief about systems of hydrophilic lipophilic classification.
- c) Explain methods for measuring surface and interfacial tensions.
- d) Discuss electric properties of interfaces and applications of surfactants in surface and interfacial phenomenon.

OR

Discuss kinetic properties of colloids and pharmaceutical applications of emulsions.

4. a) What do you mean by common ion effect?
- b) What are factors affecting protein binding?
- c) Elaborate methods to study steady state diffusion with suitable procedure and apparatus.
- d) Discuss theory and mechanisms of powder dissolution.

OR

Classify semisolids and discuss drug diffusion in coarse disperse systems.

5. a) Define plastic and dilatant flow.
- b) What do you mean by "Controlled flocculation"?
- c) Write brief note on applications of Rheology.
- d) Discuss methods to measure thixotropy, Bulges and spurs.

OR

Discuss the methods to determine viscosity using capillary method, falling sphere method and Cup and bob technique.