

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

SUBJECT: PHYSICAL PHARMACY-II

Day: **Tuesday**
Date: **14/11/2017**

W-2017-3826

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

N.B:

- 1) **Q.No 1 and Q.No. 5 are COMPULSORY.**
- 2) Out of the remaining solve Any **TWO** questions from each section.
- 3) Both the sections should be written in **SEPARATE** answer books.
- 4) Figures to the **RIGHT** indicate full marks.

SECTION-I

- Q.1** Answer Any **FIVE** of the following: (10)
- a) Define HLB. Give Griffin scale for classification of HLB.
 - b) Define contact angle. Give its significance.
 - c) How emulsions are preserved?
 - d) Enlist methods used to determine surface tension.
 - e) Suspensions are thermodynamically unstable. Explain.
 - f) Define i) CMC ii) Imbibition
- Q.2** a) Give detailed account on theories of emulsification. (07)
b) Write an exhaustive note on adsorption isotherms. (08)
- Q.3** a) Give applications of surfactants in pharmacy. (07)
b) Explain in detail phenomenon of solubilization. (08)
- Q.4** Write short notes on Any **THREE** of the following: (15)
- a) Kinetic properties of colloids
 - b) DLVO theory
 - c) Instability in an emulsion
 - d) Association colloid

SECTION-II

- Q.5** Answer Any **FIVE** of the following: (10)
- a) Give significance of Heckel plots.
 - b) Enlist methods used to determine particle size.
 - c) What is plug flow? How it can be overcome?
 - d) Give Rumpf classification of bonding in tablets.
 - e) Give applications of rheology in pharmacy.
 - f) Enlist methods to differentiate crystalline & amorphous form.
- Q.6** a) Explain in detail methods used to determine surface area of powder. (07)
b) Give an account of rheograms for non-Newtonian flow behavior. (08)
- Q.7** a) Explain in detail derived properties of powder. (07)
b) Give a detailed account on polymorphism. (08)
- Q.8** Write short notes on Any **THREE** of the following: (15)
- a) Coulter counter
 - b) Viscoelasticity
 - c) Compression
 - d) Factors affecting powder flow

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