

S.Y.B.PHARM. SEMESTER-IV (CBCS - 2015 COURSE) :
SUMMER - 2018
SUBJECT : PHYSICAL PHARMACY – II

Day : **Wednesday**
Date : **02/05/2018**

Time : **02.00 PM TO 05.00 PM**
Max. Marks : 60

S-2018-3924

N.B.:

- 1) **Q.No.1 and Q.No.5 are COMPULSORY.** Out of 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 different types of emulsions? Enlist methods to identify the same.
 - b) What is HLB? Classify surfactants on the basis of HLB.
 - c) Classify colloids with examples.
 - d) Suspensions are thermodynamically unstable. Explain.
 - e) Define syneresis and imbibition.
 - f) Write an equation for Freundlich isotherm.
- Q.2** a) Explain methods used to determine surface tension. [06]
b) Derive an expression for spreading co-efficient. [04]
- Q.3** a) Give detailed account of solubilization. [06]
b) Add a note on controlled flocculation. [04]
- Q.4** Write notes on **ANY TWO** of the following: [10]
- a) Theories of emulsification
 - b) DLVO theory
 - c) Preparation of colloids

SECTION – II

- Q.5** Answer **ANY FIVE** of the following: [10]
- a) Classify crystals on the basis of bonds between molecules.
 - b) Enlist different types of viscometers.
 - c) What are bingham bodies?
 - d) Give significance of Heckel plots.
 - e) Explain dilatant flow behavior.
 - f) Give applications of micromeritics in pharmacy.
- Q.6** a) Give an account of compaction of powders and methods to evaluate the same. [06]
b) Classify polymorphs with examples. [04]
- Q.7** a) Explain in detail methods used to determine surface area of particles. [06]
b) Give an account of viscoelasticity. [04]
- Q.8** Write short notes on **ANY TWO** of the following: [10]
- a) Derived properties of powder
 - b) Thixotropy and methods to determine the same
 - c) Measurement of diffraction angle

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