SUBJECT: PHYSICAL PHARMACY - II

Day: Saturday
Date: 04/05/2019

S-2019-4391

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

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) Answer to both the sections should be written in **SEPARATE** answer books.
3) Figures to the right indicate **FULL** marks.

SECTION - I

Q.1 Answer **ANY FIVE** of the following: **(10)**
 a) Which potential governs stability of dispersed systems?
 b) Enlist methods used to prepare colloids.
 c) Emulsions are thermodynamically unstable. Explain
 d) Give significance of spreading co-efficient.
 e) What is Faraday tyndal effect?
 f) Define: i) Syneresis   ii) CMC

Q.2 a) Explain in detail phenomenon of solubilization. **(06)**
 b) Add a note on methods to identify the type of emulsion. **(04)**

Q.3 a) Give detailed classification of colloids. **(06)**
 b) Explain phenomenon of controlled flocculation. **(04)**

Q.4 Write short notes on **ANY TWO** of the following: **(10)**
 a) Semisolid bases
 b) Methods to determine surface tension
 c) DLVO theory

SECTION – II

Q.5 Answer **ANY FIVE** of the following: **(10)**
 a) What is plug-flow? How it can be overcome?
 b) Give significance of Heckel plots.
 c) Enlist bonds formed in a tablet.
 d) What are crystal defects?
 e) Give an account of packing arrangements of particles in a powder.
 f) Enlist methods to distinguish crystalline and amorphous form.

Q.6 a) Explain in detail methods used to determine particle size. **(06)**
 b) Add a note on methods to determine diffraction angle. **(04)**

Q.7 a) Give an account of rheograms for Newtonian & Non-Newtonian flow **(06)**
 behavior.
 b) Add a note on factors affecting flow of powder. **(04)**

Q.8 Write short notes on **ANY TWO** of the following: **(10)**
 a) Viscoelasticity
 b) Derived properties of powder
 c) Polymorphism

*   *   *   *   *