Roll No ....

BP-403T (CBGS)

B.Pharmacy, IV Semester (PCI Scheme)

Examination, May 2018

Choice Based Grading System (CBGS)

Physical Pharmaceutics - II

Time : Three Hours

Maximum Marks : 75

Note: Answer any five questions. All questions carry equal marks.

1. a) Write a note on thixotropy and negative-thixotropy.
   b) Discuss the basic differences between Newtonian and non-Newtonian system. Discuss about the plastic and pseudo-plastic flow with examples.
   c) Write a short note on kinematic viscosity.

2. a) Write a note on HLB system. rgpvonline.com
   b) Define suspension. Discuss the differences between flocculated and deflocculated suspensions.
   c) Describe in detail about microemulsions and multiple emulsions.

3. a) What do you mean by Newtonian flow system? Discuss the non-Newtonian flow system with suitable examples.
   b) Write a note on Heckel equation.
   c) Write a note on rotational viscometers.

4. a) Discuss the various derived properties of powders. Write down the application of the derived properties in the field of pharmacy.
   b) Discuss the various methods of particle size determination and its applications.
   c) Write a short note on particle size and its distribution.

5. a) Write down the differences between order and molecularity of a chemical reaction. Derive the general equations for zero and first order kinetics.
   b) Write a note on accelerated stability studies.
   c) The half-life ($t_{1/2}$) of a drug that decomposes by first order is 90 days, calculate rate constant (k) and the shelf life (t_{90}).

6. a) Write notes on derived properties of powders.
   b) Write a note on particle size and its distribution.
   c) Discuss about the coulter system and optical microscopic method of size distribution.

7. a) Discuss the various factors influencing the chemical and physical degradation of pharmaceutical product.
   b) Discuss in detail about pseudo first order and first order reaction with suitable examples.
   c) Derive the half-life ($t_{1/2}$) period and shelf life (t_{90}) period for first order reaction.

8. a) Discuss the optical and kinetic properties of colloids.
   b) Explain the concept of DLVO theory with energy curves. How this theory is applied in stabilizing the colloidal dispersion?

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