**B.Pharm 4th Semester Examination**

**Subject- Physical Pharmaceutics-II (BP403T)**

 **Full mark- 75 Time – 3 hours**

 **Answer all the questions.**

**1. Answer all (10x2=20)**

 **(a) Define a pseudo first order reaction, Give two examples.**

**(b) What do you understand by overages? Why its addition in formulation is necessary.**

**(c) Define Newtonian flow. Give two examples.**

 **(d) Define plastic deformation. What is its importance in pharmacy.**

**(e) What is meant by HLB? Describe one method to determine the same.**

**(f) Define contact angle. What are its applications.**

**(g) What are Structured Vehicles? What are the properties that a structural vehicle should possess ?**

**(h) Describe two methods for identifying the type of emulision ?**

**(i) List the kinetic properties of colloids. What are its applications?**

**(j) Define lyophobic colloids, Give two examples.**

**Q. 2. Answer any two Questions. (2 x 10=20)**

**(a) Write the methods to ascertain the order of a reaction.**

**(b) Explain non-Newtonian type of flow with rheograms, mechanism and suitable examples.**

**(c) Discuss the factors affecting physical stability of suspension.**

**Q. 3. Answer any Seven Questions. (7x5=35)**

 **(a) What is creaming in emulsion? How it can be prevented.**

**(b) Explain the working principle of cub and bob viscometer with a labelled diagram.**

**(c) Describe the applications of amphiphiles in Pharmacy.**

**(d) Describe the influence of temperature on the rate of a reaction.**

**(e) Write short note on Heckle equation.**

**(f) Explain how the drug product can be stabilised against oxidation and hydrolysis.**

**(g) Explain kinetic and electrical properties of colloidal dispersion.**

**(h) Derive an equation for the determination of surface tension of a liquid by the capillary rise method.**

**(i) Describe the method to compare the thixotropic materials of plastic system.**