

Seat No.: _____

Enrollment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B Pharm. SEMESTER-IV EXAMINATION –WINTER -2020**Subject Code: BP403TP****Date: 11/02/2021****Subject Name: Physical Pharmaceutics-II****Time: 02:30PM TO 04:30PM****Total Marks: 54****Instructions:**

1. Attempt any **THREE** questions from Q-1 to Q-6.
2. Q.7 is compulsory to attempt.
3. Make suitable assumptions wherever necessary.
4. Figures to the right indicate full marks.

- Q.1** (a) Differentiate Lyophilic colloids and Lyophobic colloids. Discuss association colloids. **06**
- (b) Explain the concept of DLVO theory along with energy curve and how this theory is applied in stabilizing the colloidal dispersion. **05**
- (c) Enlist different properties of colloids. Explain kinetic properties. **05**
- Q.2** (a) Enumerate different methods commonly used for measurement of particle size determination. Describe optical microscopy method. **06**
- (b) Classify the methods used for determination of surface area. Explain air permeability method with diagram. **05**
- (c) Define and explain: Angle of repose and Carr's Index with their pharmacopoeial specification. **05**
- Q.3** (a) Explain sedimentation parameters of suspension in detail. **06**
- (b) Enlist the physical instability markers of emulsion and explain any two. **05**
- (c) Discuss various mechanism of emulsifying agents. **05**
- Q.4** (a) Discuss accelerated stability testing in expiration dating of pharmaceutical dosage forms. **06**
- (b) Derive the equation of Half life for zero order and first order kinetics. **05**
- (c) Write about chemical factors influencing the chemical degradation of pharmaceutical product. **05**
- Q.5** (a) Explain the plastic and pseudoplastic flow curves with example. **06**
- (b) Define: Kinematic viscosity, Fluidity, Bulges, Rheopexy and Poise. **05**
- (c) Explain cup and bob viscometer with diagram. **05**
- Q. 6** (a) Discuss porosity and packing arrangement of powder with application of micromeritics. **06**
- (b) Describe different types of emulsion. **05**
- (c) Define thixotropy. Comment on thixotropy and antithixotropy. **05**
- Q.7** (a) Enlist the different type of densities of powder. Write the experimental method for the determination of any one of them. **06**
- OR**
- (a) Define suspension. Write a note on factors affecting stability of suspension. **06**
- OR**
- (a) Write the principle and working of Ostwald viscometer. **06**