



J-16120107010404000 Seat No. _____

M. P. M. (Sem. IV) (CBCS) Examination

June / July – 2019

Physical Pharmaceutics - II

Time : **3 Hours**]

[Total Marks : **75**

- Instructions :** (1) Figure to the right indicates marks.
(2) Draw neat and clean diagrams as required.

1 Answer the following questions : **10×2=20**

- (a) Creaming is reversible process while breaking is irreversible process. Explain.
- (b) Explain structure vehicles with examples.
- (c) Write down the Arrhenius equation and enlist its two applications.
- (d) Explain pseudo first order reaction with examples.
- (e) Write down the classification of colloidal dispersion with example.
- (f) Define Angle of repose and write down its importance in pharmaceutical field.
- (g) Define yield value. How it is determine ?
- (h) Explain order of reaction with example.
- (i) Define protective colloids with example.
- (j) What is Brownian movement? Which formulation exhibit this movement.

2 Answer any **two** out of the following : **2×10=20**

- (a) Explain in detail about various factors affecting stability of emulsion.
- (b) Enlist different methods of particle size determination. Explain in detail any two methods.
- (c) Define thixotropy. Draw different types of thixotropic curves and explain the mechanisms for their behavior with suitable examples.

3 Answer any **seven** out of the following : **7×5=35**

- (a) Explain the optical properties of colloids.
- (b) Explain the DLVO theory for the stability of colloidal dispersion.
- (c) Describe the air permeability method for the determination of surface area of a powder with neat diagram.
- (d) Write down the difference between zero order and first order reaction with suitable examples.
- (e) Discuss the limitations of accelerated stability studies.
- (f) Describe various ways of quantifying the flow of powders.
- (g) Explain cup and bob viscometer with labelled diagram.
- (h) Differentiate plastic and pseudoplastic flow with suitable examples.
- (i) Explain about various factors affecting sedimentation in suspension.
