Code No: PHR16213 **R16** SET - 1

II B. Pharmacy I Semester Supplementary Examinations, March - 2021
PHYSICAL PHARMACY-II

Time: 3 hours Max. Marks: 70

Note: 1. Question paper consists of two parts (**Part-A** and **Part-B**)
2. Answering the question in **Part-A** is Compulsory
3. Answer any **FOUR** Questions from **Part-B**

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PART –A

1. a) What is the importance of energy of activation in accelerated stability studies? (2M)
   b) Emulsion contain an auxiliary label "Shake well before use" Why? (2M)
   c) Angle of repose and its importance (2M)
   d) Define the following 1) Half life 2) True volume of powders (2M)
   e) Stokes diameter & Projected area diameter (2M)
   f) What is intrinsic viscosity? (2M)
   g) Phase volume ratio and its importance. (2M)

PART –B

2. a) Describe the methodology of accelerated stability studies and mention its limitations. (10M)
   b) In a first order degradation of an organic compound, the time for half change is 30min. at 300K and 20 min. at 410K. Calculate the energy of activation (R = 8.314 J/mol K) (4M)

3. a) Explain the measurement of surface and interfacial tensions. (10M)
   b) Add a note on applications of surface active agents. (4M)

4. a) Discuss about theories of emulsification. (10M)
   b) Differentiate between flocculation and creaming in an emulsion. (4M)

5. a) Discuss the Air permiability method for determination of surface area. (10M)
   b) Write a note on Gold number of colloids. (4M)

6. a) Discuss about thixotropy and its determination methods. (10M)
   b) Add a note on interfacial properties of suspended particles in suspensions. (4M)

7. a) Discuss the Optical microscopy method for determination of particle size of powder. (10M)
   b) Add a note on porosity and its applications. (4M)
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