



(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 150408

Roll No.

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B. Pharm.

(SEM. IV) THEORY EXAMINATION, 2014-15
PHARMACEUTICS - IV (PHYSICAL PHARMACY)

Time : 3 Hours]

[Total Marks : 70

- 1 Attempt any two questions. 7x2=14
- (a) Explain, drug stability study with AST (Accelerated Stability Testing).
 - (b) Define buffer capacity and how will you determine for weak acid & weak base? Give examples of pharmaceutical buffers.
 - (c) Explain drug degradation pathway with suitable examples.
- 2 Attempt any four questions. 3.5x4=14
- (a) Define porosity. Explain packaging arrangement of powder.
 - (b) Define angle of response. Suggest two methods to improve the flow properties of granules.

- (c) Explain the coulter current apparatus with neat and labelled diagram and working.
- (d) Explain Air permeability method with the help of labelled diagram.
- (e) Explain methods for determination of true density.
- 2** Attempt any four questions. **3.5x4=14**
- (a) Explain the formation of electrical double layer with a neat labelled diagram.
- (b) State and explain Langmuir and freundlich isotherm with equation.
- (c) Explain spreading coefficient and surface free energy in detail.
- (d) Write short note on HLB? Also explain its method of determination of HLB?
- (e) Define detergency? Explain any one method for determination of surface tension method.
- 4** Attempt any four questions. **3.5x4=14**
- (a) Explain Non-newtonian type of flow with rehograms, mechanism and suitable example.
- (b) Define thixotopy? Explain its measurements.
- (c) Define kinematic viscosity. Explain any one type of rotational viscometer.
- (d) Explain falling sphere viscometer in detail.
- (e) What is plug flow? Give its applicatation in pharmacy.

5 Attempt any four questions.

3.5x4=14

- (a) Define Schulze-Hardy rule? Explain Brownian motion.
 - (b) Discuss the factors which improve the physical stability of emulsions?
 - (c) Define suspensions? Classify them in detail.
 - (d) Discuss factors which improve physical stability of suspension.
 - (e) Compare different types of colloids.
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