



MCR-1612010701030100 Seat No. _____

M. P. M. Examination

May/June – 2018

Physical Pharmacy

Time : 3 Hours]

[Total Marks : 80

- Instructions :** (1) Figures to the right indicate marks.
(2) Answer any three questions from each section.
(3) Question one and question five are compulsory.
(4) Draw neat and clean diagrams as required.

SECTION-I

- 1** Answer any seven out of 10 : **14**
- (a) Write down the difference between lyophilic colloids and lyophobic colloids.
 - (b) Enlist different types of solutions with example.
 - (c) Define colligative properties with example.
 - (d) Define Nernst and Zeta potentials.
 - (e) Define viscosity and psychorheology.
 - (f) Define Partition coefficient and give the equation.
 - (g) Enlist different factors affecting solubility of drug.
 - (h) Define creaming and coalescence.
 - (i) Define porosity and write down its applications.
 - (j) Define HLB value and give the equation for determination of it.
- 2** Answer the following questions :
- (a) Define liquid crystalline state. Explain in detail its properties and significance. **7**
 - (b) Explain Raoult's law and its deviations. **6**
- 3** Answer the following questions :
- (a) Explain Kinetic properties of colloids. **7**
 - (b) Enlist different binding force between molecules and explain any one in detail. **6**

- 4 Answer the following questions :
- (a) Explain osmotic pressure and write down the methods of determination of osmotic pressure. 7
 - (b) Explain in brief the methods of evaluation of Complexes. 6

SECTION-II

- 5 Answer any two out of three : 7×2 =14
- (a) Explain in detail derived properties of powders.
 - (b) Explain Capillary viscometer in detail with label diagram.
 - (c) Enlist different method of measurement of surface and interfacial tension and explain any one in detail.
- 6 Answer the following questions :
- (a) Enlist different methods of particle size determination and explain any two methods in detail. 7
 - (b) Explain in detail the Arrhenius's theory of Electrolyte dissociation. 6
- 7 Answer the following questions :
- (a) Explain Thixotropy and method of determination of Thixotropy. 7
 - (b) Describe the term physical stability of suspension. Describe any one method used to evaluation the physical stability of a suspension. 6
- 8 Answer the following questions :
- (a) Explain various stability problems occurs in Emulsion. 7
 - (b) Write a short note on Accelerated Stability Testing. 6
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