



J A H - 0 1 4 - 0 0 3 7 0 3 *
JAH-014-003703 Seat No. _____

M. P. M. (Sem. VII) (WEF. - 2014-15 & 2015-16)

Examination

November - 2019

Dosage Form Design-I

Faculty Code : 014

Subject Code : 003703

Time : 3 Hours]

[Total Marks : 80

Instructions :

1. Answer any three questions.
2. Question no. 1 and Question no. 5 are compulsory.
3. Figure to the right indicate marks.
4. Draw neat & clean diagrams as required.

SECTION-I

- 1 Answer any SEVEN question out of TEN. **7×2=14**
 - 1 Define polymorphism and amorphism.
 - 2 Differentiate pinocytosis and phagocytosis.
 - 3 Enlist the factors affecting the dissolution of drug.
 - 4 Differentiate symport and antiport.
 - 5 Define crystal habit and internal structure
 - 6 How does passive transport differ from active transport ?
 - 7 What do you mean by drug disposition and drug distribution ?
 - 8 Define the Cmax and Tmax.
 - 9 Dissolution is considered as rate controlling step in the absorption of drugs. Why ?
 - 10 _____ Dissolution Apparatus is used for the transdermal Patch and _____ for floating dosage form.
- 2 Answer the following Questions :
 - 1 Describe the influence of protein binding on drug disposition. **7**
 - 2 Explain the vesicular transport mechanism for absorption of drug. **6**

- 3** Answer the following Questions
- 1 Describe the mechanism of passive transport for the absorption of the drugs. **7**
 - 2 Discuss the various factors affecting absorption of drug. **6**
- 4** Answer the following Questions :
- 1 Write about the physiological barriers to distribution of drug. **7**
 - 2 Explain the factors affecting dissolution of drug. **6**

SECTION-II

- 5** Answer any TWO out of THREE : **2×7=14**
- 1 Describe the Physico-chemical factors influencing the volume of distribution of the drugs.
 - 2 What is the importance of particle size, shape and density on dissolution rate and dosage form in the formulation ?
 - 3 Explain the various theory of Dissolution.
- 6** Answer the following Questions :
- 1 Explain the one compartment open model iv bolus administration with its parameters. **7**
 - 2 Enumerates the various dissolution apparatus and explain in detail about Dissolution apparatus type - II. **6**
- 7** Answer the following Questions :
- 1 Write a note on BCS classification system with its importance. **7**
 - 2 Write a brief account on Biodegradable polymers with its degradation mechanism. **6**
- 8** Answer the following Questions :
- 1 Discuss compartment modeling with advantages and disadvantages. **7**
 - 2 Define pharmacokinetic model. Explain the mammillary model. **6**