



HDU-02011246

Seat No. _____

M. Pharm. (Sem. III) Examination

November / December – 2017

Novel Drug Delivery System - II

Time : **3 Hours**]

[Total Marks : **80**

- Instructions :**
- (1) Answer and tie both the sections separately.
 - (2) Figures to the right indicates marks.
 - (3) Answer any three (3) questions from each section.
 - (4) Que. One (1) & Que. Five (5) are compulsory.
 - (5) Draw neat and clean diagrams as required.

SECTION - I

1 Answer any seven out of given ten questions : **7×2=14**

- (a) Enlist the factors affecting drug delivery of Pulmonary route.
- (b) What do you mean by Stealth technology?
- (c) Enlist the drug selection criteria for Transdermal drug delivery system.
- (d) What is the rationale for preparation of pro liposome?
- (e) Give the examples of thermo responsive polymer for nasal gel.
- (f) Explain the Role of Cholesterol in bilayer formation in liposomes.
- (g) Polysorbates (Tween) enhance the penetration into the skin by which mechanism?
- (h) Give the difference between Microsphere and Microcapsule.
- (i) What do you mean by dot matrix technology?
- (j) What are the advantages and disadvantages of Implants?

2 Answer the following :

- (a) Explain various types of Transdermal drug delivery system. **7**
- (b) Write in detail about mechanism of aerosol deposition. **6**

- 3** Answer the following :
- (a) Explain Newer technologies in Transdermal drug delivery system. **7**
 - (b) Give brief account on characteristic and method of preparation of microcapsules. **6**

- 4** Answer following :
- (a) Explain DUROS and ProLease Technology. **7**
 - (b) Explain Magnetically modulated microparticles. **6**

SECTION - II

- 5** Answer any two out of given three questions : **2×7=14**
- (a) Describe in brief structure of neosomes ? Write about method of preparation of neosomes.
 - (b) Explain the various factors affecting in Nasal drug delivery system.
 - (c) Write a brief note on Biodegradable polymers along with it's mechanism of biodegradation.

- 6** Answer the following :
- (a) Write a detailed note on emerging technologies of aerosol drug delivery system. **7**
 - (b) Write a short note on approaches for protein drug delivery system. **6**

- 7** Answer the following :
- (a) Describe the different routes of protein and peptide drug delivery system. **7**
 - (b) Explain recent advances in vaginal drug delivery system. **6**

- 8** Answer the following :
- (a) Explain the Principle, Rational, merits and demerits, formulations and evaluations of Microspheres along with its recent advancement. **7**
 - (b) Define Permeation Enhancer and write a detailed note on it. **6**