

Fourth Year B Pharm Sem VIII (Choice Based)

BPH_E_811_T – Novel Drug Delivery Systems

Descriptive type Questions

QI Solve any one of the two questions

- Q1 (a) Elaborate on design and working of 'Alzet Osmotic Pump'.
(b) Discuss biocompatibility aspects related to implantable parenteral controlled drug delivery systems?
- Q2 (a) Write a note on 'Weibel's Lung Model'.
(b) Discuss evaluation tests for colon targeted drug delivery system.

QII. Solve any four of the five questions

- Q1 (a) Explain any two theories of mucoadhesion.
(b) Classify liposomes on the basis of their structure and composition-application.
- Q2(a) Enumerate the different types of transdermal DDS and discuss any one in brief.
(b) Explain the principle of ocular iontophoresis with the help of a well labelled diagram.
- Q3 (a) How does a novel drug delivery system score over a conventional drug delivery system?
(b) Explain the various types of polymers.
- Q4 (a) Explain the concept of 'absorption window' with respect to design of GRDDS.
(b) State the desirable properties of implantable parenteral controlled drug delivery systems.
- Q5 (a) Enlist factors affecting permeation through blood-brain-barrier (BBB).
(b) Write a brief note on permeation enhancers used for nasal drug delivery.

Descriptive type Questions

Q1.) Attempt any one out of two:

- Q1.a.)** Enlist different methods of pelletization. Describe in brief melt extrusion technique.

4M

Q1.b.) Elaborate on the factors affecting lymphatic targeting.	4M
Q2.a.) Explain evaluation of pulmonary drug delivery systems.	4M
Q2.b.) Classify the approaches to controlled release parenteral drug delivery. State its limitations.	4M
Q. II.) Attempt any four out of five:	
Q 1.a.) Enlist factors affecting mucoadhesion. Explain any two.	4M
Q 1.b.) Define microspheres and discuss the methods of preparation of microspheres in brief.	4M
Q 2.a.) Discuss various approaches used in development of TDDS. How will you design Membrane permeation controlled TDDS.	4M
Q 2.b.) Explain In-situ gelling systems for ocular delivery.	4M
Q 3.a.) Elaborate on the basis for classification of polymers.	4M
Q 3.b.) Differentiate between active and passive targeting.	4M
Q 4.a.) Write a note on elementary osmotic pump.	4M
Q 4.b.) Describe intra-nasal drug delivery systems.	4M
Q 5.a.) Explain in brief feedback regulated parenteral controlled Drug delivery system.	4M
Q 5.b.) Give advantages and disadvantages of NDDS.	4M

Descriptive type Questions

QI. Answer the Following (Any One out of Two):

Q1. Attempt the Following:

- a. Explain the design, working, advantages and disadvantages of Push Pull Osmotic pump.
- b. Write a note on Parenteral Implantable Drug Delivery by Diffusion Process.

Q2. Attempt the Following:

- a. Elaborate on Metered Dose Inhalers and Dry Powder Inhalers.
- b. Describe strategies for targeting a drug to a tumor.

QII. Answer the Following (Any Four out of Five):

1. Attempt the following:

- a. Enlist the components of each Particulate systems:
 - i. Microspheres
 - ii. Aquasomes
 - iii. Liposomes
 - iv. Dendrimers
- b. Write a note on Ocular Iontophoresis.

2. Attempt the following:

- a. Discuss the components of Transdermal Drug Delivery system.
- b. Describe any four in vitro evaluation tests to determine the mucoadhesive strength of the polymer.

3. Write short notes on:

- a. Limitations of the conventional drug delivery systems.
- b. Applications of Polymers in Novel Drug Delivery Systems.

4. Attempt the Following:

- a. State the advantages of Nasal Drug Delivery and explain any two mechanisms for drug absorption through intra-nasal route.
- b. Write a note on any one approach used in Activated Parenteral Controlled drug delivery systems.

5. Attempt the following:

- a. Evaluation of Floating type Gastro Retentive Drug Delivery System.
- b. Enlist different approaches used in Colon Targeting and describe any one.

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