

Sardar Patel University**M. Sc. Pharmaceutical Chemistry, Fourth Semester Examination****Monday, 18th March, 2019****02:00 p.m. - 05:00 p.m.****PS04CPCH21: Novel Drug Delivery**

Note:

1. Figures to the right indicate marks.
2. Draw neat and labeled diagram, wherever necessary.

Q-1 Attempt the followings

[08 X 01 = 08]

1. The drug is designed to release slowly and to provide a continuous supply over an extended period of time is called _____.
 - a) Extended release
 - b) Delayed release
 - c) Prolonged release system
 - d) Timed release
2. Which of the following is the design consideration of pharmaceutical approaches for controlled release drug delivery system
 - a) Matrix dissolution control
 - b) Membrane material
 - c) Encapsulation dissolution control
 - d) All
3. Which of the following is/are diffusion controlled drug delivery system?
 - a) Sub reservoir
 - b) Gap filled
 - c) Matrix
 - d) All
4. Therapeutic compounds with half-life, _____ are excellent candidates for sustained release preparations.
 - a) <8 hr
 - b) >8 hr
 - c) 1 - 2 hr
 - d) 0 hr
5. Transdermal drug delivery approach cannot deliver _____ drugs.
 - a) Anion
 - b) Cation
 - c) Both a & b
 - d) None
6. Physicochemical evaluation for transdermal patches involves _____.
 - a) Thickness
 - b) Uniformity of weight
 - c) Drug content
 - d) All of the above
7. Parenteral controlled drug delivery system is safe from _____.
 - a) Accidental release
 - b) Simple to administer and remove
 - c) Mechanically strong and biocompatible
 - d) All
8. Tablets are often coated not just because of the following reasons.
 - a) To protect the drug from the external environment
 - b) To mask bitter tastes
 - c) To increase friability
 - d) To make swallowing easier

(P.T.O.)

- Q-2 Answer the following questions (**Any seven**). [07 X 02 = 14]
1. Classify the sustained release drug delivery system.
 2. What is repeat action?
 3. Enlist physicochemical properties of drugs.
 4. State advantages of pulsatile drug delivery system.
 5. Enlist disadvantages of controlled drug therapy.
 6. What is first pass effect?
 7. State the limitations of oral route of drug administration?
 8. Enlist factors affecting transdermal bioavailability.
 9. State desired properties for penetration enhancers.
- Q-3 (A) Discuss the medical rationale for control release drug delivery system. [06]
- (B) Advantages and disadvantages of sustained release drug delivery system [06]
- OR**
- (B) Write a note on chitosan as a control release of drug [06]
- Q-4 (A) Explain Biological Factors Influencing the Design and Performance of Sustained Release Products. [06]
- (B) Enlist technologies for drug delivery system. Explain any three in detail. [06]
- OR**
- (B) What is controlled drug therapy? State the potential advantages of CDT. [06]
- Q5 (A) Explain the novel drug delivery system with special reference to parenteral route of drug administration. [06]
- (B) Discuss the factors for the drug administration. [06]
- OR**
- (B) What are the advantages and disadvantages for topical route of drug administration [06]
- Q6 (A) Explain transdermal patches in detail. State advantages and limitations for the TDDS. [06]
- (B) What is drug target? Explain different approaches. [06]
- OR**
- (B) Explain site specific drug delivery system in detail. [06]

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