BRAINWARE UNIVERSITY

Term End Examination 2022
Programme – B.Pharm-2019
Course Name – Novel Drug Delivery System
Course Code - BP704T
(Semester VII)

Full Marks : 75 **Time : 3:0 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question) 1 x 20=20

1. *Choose the correct alternative from the following :*

(i) Biodegradable polymer is:

a) PLGA b) Ethyl Cellulose
c) Polydimethyl siloxane d) All

(ii) Which of the following is used to increase the density

a) Potassium permanganate. b) Boric Acid.
c) Iron Powder. d) Glucose Powder.

(iii) Conventional hydrogels usually have porous size of 10¼m hence require much time to reach equilibrium while their modified version Super porous Hydrogels' ' reach equilibrium faster has an average pore size of

a) >100¼m b) > 100nm
c) 10¼m d) 10nm

(iv) Identify the approach not useful to increase gastric retention time for GRDDS.

a) High density Systems b) Floating Systems.
c) Swelling Systems. d) Compressing Systems.

(v) Tensile strength of ideal polymer is

a) High b) Low
c) Medium d) None

(vi) Protein stability in the formulation is a major issue with Pulmonary Drug Delivery System, it can be addressed by adding Surfactants which act by,

a) Reducing protein aggregation. b) Forms protective complexes
c) Decreases their absorption d) Prevent coagulation

(vii) The curve of Controlled drug delivery remains at:

a) Toxic level b) Therapeutic level
c) Subtherapeutic level d) All levels

(viii) An advantage of Novel Drug Delivery Systems is

a) It causes fluctuation of blood levels b) It cannot be target specific
c) It increases toxicity of the drug d) It reduces side effects of the drug

(ix) Bile salts like Sodium deoxycholate, sodium glycocholate are used in Nasal drug

delivery systems as a

a) Propellent
b) Bioadhesives
c) Permeation enhancers
d) Antiallergics

(x) Solubility & pKa include in the following factor:

a) Patient related factor
b) Biological Factor
c) Physico-Chemical factor
d) None

(xi) Which of the following equation follows Zero Order Release:

a) dMt/dt = k(M0 - Mt)
b) dMt/dt = k
c) dMt/dt = k t1/2
d) All

(xii) Which of the following characteristics is suitable for selection of a candidate for TDDS?

a) Large Dose.
b) Larger molecular Size.
c) Higher first pass effect.
d) Metabolism in Skin.

(xiii) t1/2 = 0.693 is the value of half life of the following order of drug release:

a) Zero order
b) Pseudo zero order
c) First order
d) None

(xiv) Which of the following drugs cannot be given as transdermal administration?

a) Drugs with very short half-lives
b) Drugs with narrow therapeutic indexe
c) Easy removal and termination
d) Drugs against peptic ulcer

(xv) Which of the following characteristics is suitable for transdermal drug?

a) Large drug dose
b) Large molecular size
c) Drugs with narrow therapeutic indices
d) Drugs which are metabolized in the skin

(xvi) From which of the following mechanisms most of the drugs get absorbed via skin.

a) Active transport
b) Passive Transport
c) Facilitated transport
d) Osmosis

(xvii) In Noyes-Whitney equation [dC / dt = KD A(CS - C)] , CS is the:

a) The concentration of drug in bulk of the solution
b) Saturation solubility of drug
c) The concentration of drug in the blood
d) None

(xviii) From which of the following mechanisms most of the drugs get absorbed via skin.

a) Active transport
b) Passive Transport
c) Facilitated transport
d) Osmosis

(xix) Polymer is defined as:

a) Very small molecule
b) Very large molecule
c) Medium molecule
d) None of these

(xx) Nylon is:

a) Natural polymer
b) Synthetic polymer
c) Semisynthetic polymer
d) None

Group-B

(Short Answer Type Questions) 5 x 7=35

2. Write the difference between dissolution and diffusion (5)

OR

Write the applications of liposomes (5)

3. Write the advantages and disadvantages of liposomal drug delivery systems (5)

OR

Write the advantages and disadvantages of niosomal drug delivery systems (5)

4. Describe the ion exchange resins methods used in controlled drug delivery formulations (5)

OR

Write the properties of ideal targeted drug delivery systems (5)

5. Write the mechanism of respiratory deposition (5)

OR

Write about the formulation of pressurized metered dose inhalers (5)

6. Write the disadvantages of drug targeting (5)

OR

Write the applications of nanoparticulate drug delivery systems (5)

7. What are the advantages and disadvantages of controlled drug delivery systems (5)

OR

Explain the need for gastro-retention for therapeutic agents (5)

8. Discuss the advantages and disadvantages of transdermal drug delivery system (5)

OR

Explain the applications of gastroretentive drug delivery system (5)

Group-C

(Long Answer Type Questions) 10 x 2=20

9. Explain the principle involved in the design of controlled drug delivery systems (10)

OR

Write about the properties influencing drug targeting (10)

10. Write about the evaluation parameters of gastroretentive drug delivery system (10)

OR

Explain the concept and approaches for the Controlled release formulations (10)

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