2024/07

SET A

B. PHARM.
SEVENTH SEMESTER
NOVEL DRUG DELIVERY SYSTEM
BP704T [SPECIAL REPEAT]

[USE OMR SHEET FOR OBJECTIVE PART]

Duration : 3 hrs. **Full Marks : 75**

(PART-A: Objective)

Time : 30 min. **Marks : 20**

Choose the correct answer from the following: ***1×20=20***

1. Water reservoir is present in which osmotic pump?
   a. Alzet osmotic pump
   b. Higuchi Leeper pump
   c. Elementary osmotic pump
   d. Push pulls osmotic pump
2. Which one is an Osmotic agent?
   a. Polyethylene glycol
   b. Magnesium Sulphate
   c. Phthalte
   d. Triethyl citrate
3. Drugs with_____therapeutic index is unsuitable for incorporation in controlled release formulation.
   a. High
   b. Low
   c. Moderate
   d. None of the above
4. _____ is an example of permeation enhancer.
   a. MCC
   b. PVP
   c. EVA
   d. DMSO
5. Hydrocolloids forms _____ in GRDDS.
   a. Acidic Ph
   b. Gel
   c. Alkaline pH
   d. Balloon
6. Function of cholesterol in Liposome DDS is
   a. Fluidity buffer
   b. Bioadhesion
   c. Enhance penetration
   d. Both a and c
7. Alginate polysaccharides are used in_____ microencapsulation technique
   a. Pan coating
   b. Solvent evaporation
   c. Coacervation
   d. Ionotropic gelation technique
8. Which theory explains formation of an electric double layer at the mucoadhesive drug delivery?
   a. Wetting theory
   b. Electronic theory
   c. Absorption theory
   d. Cohesive theory
9. Which technique can be use to prepare nanoparticle?
   a. Solvent evaporation
   b. Lipid hydration method
   c. Sonication
   d. Freeze thaw

10. Which one is made by Non ionic surfactant?
    a. Liposome
    b. Niosome
    c. Nanoparticle
    d. Monoclonal antibody

11. For a drug to be formulated in to controlled/modified release dosage form, margin of safety should be...
    a. Very low
    b. Very high
    c. Normal
    d. None of these

12. Elimination half-life of drug used for CRDDS
    a. 12 - 15 hrs.
    b. 2 – 6 hrs.
    c. 30 – 120 hrs.
    d. 5 – 8 hrs.

13. In this system drug uniformly dissolved or dispersed in a release retarding material
    a. Matrix system
    b. Reservoir system
    c. Hybrid system
    d. Both a & b

14. Matrix system is also known as
    a. Reservoir system
    b. Monolithic system
    c. Microcapsule
    d. All of these

15. Which polymers are not soluble in water?
    a. Ethyl cellulose
    b. CMC
    c. PVP
    d. All of these

16. In ocular drug delivery system, SODI stands for
    a. Soft Ocular Drug Inserts
    b. Superoxide dismutase
    c. Soluble Ophthalmic Drug Inserts
    d. Soluble Ocular Drug Implant.

17. Copper bearing IUDs example -
    a. TCu- 380A
    b. MLCu – 375
    c. LNG- 20
    d. a & b

18. Water content in eyes
    a. 95%
    b. 98%
    c. 96%
    d. 97%

19. Following formulations would not be applicable to ocular administration
    a. Solution
    b. Suspension
    c. Liniment
    d. Ointment

20. Length of IUD...
    a. 2.5 cm
    b. 3.5cm
    c. 1.5 cm
    d. 4.0 cm

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PART-B :Descriptive

Time : 2 hrs. 30 min. **Marks : 35**

[Answer any seven (7) questions]

1. Define CDDS? Write down the advantages and disadvantages of CDDS? 5
2. Define Polymers? Classify them with examples. 5
3. Write method of preparation of Liposomes. 5
4. Write factors effecting Transdermal drug delivery system. 5
5. Explain mechanism of bioadhesion. 5
6. Write a note on Ocuserts. 5
7. Define OPDDS? Write basic components of osmotic drug delivery system. 5
8. Explain about drug delivery system to anterior segment of the eye. 5
9. Write a note on Intrauterine devices (IUD). 5

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PART-C: Long type questions

[Answer any two (2) questions]

1. Describe various approaches to formulate dissolution and diffusion based on controlled drug delivery system. **10**

2. Define Liposome and niosome. Explain structural components of liposomes. Explain solvent evaporation method and polymerization method for nanoparticle. **10**

3. Write application of microencapsulation. Write classification of microencapsulation techniques. Discuss spay drying with diagram **10**

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