2023/12

SET C

B. PHARM.
SEVENTH SEMESTER
NOVEL DRUG DELIVERY SYSTEM
BP704T

[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. 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

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

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

4. Which technique can be use to prepare nanoparticle?
   a. Solvent evaporation
   b. Lipid hydration method
   c. Sonication
   d. Freeze thaw

5. Drugs with_____therapeutic index is unsuitable for incorporation in controlled release formulation.
   a. High
   b. Low
   c. Moderate
   d. None of the above

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

7. 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

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

9. 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.

10. Hydrocolloids forms _____ in GRDDS.
    a. Acidic pH
    b. Gel
    c. Alkaline pH
    d. Balloon

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

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

13. Water reservoir is present in which osmotic pump?
    a. Alzet osmotic pump
    b. Higuchi Leeper pump
    c. Elementary osmotic pump
    d. Push pull osmotic pump

14. _____ is an example of permeation enhancer.
    a. MCC
    b. PVP
    c. EVA
    d. DMSO

15. Alginate polysaccharides are used in_____ microencapsulation technique
    a. Pan coating
    b. Solvent evaporation
    c. Coacervation
    d. Ionotropic gelation technique

16. Function of cholesterol in Liposome DDS is
    a. Fluidity buffer
    b. Bioadhesion
    c. Enhance penetration
    d. Both a and c

17. 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

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

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

20. Which one is an Osmotic agent?
    a. Polyethylene glycol
    b. Magnesium Sulphate
    c. Phthalte
    d. Triethyl citrate

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PART-B :Descriptive

Time : 2 hrs. 30 min. Marks : 35

[Answer any seven (7) questions]

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

PART-C: Long type questions

[Answer any two (2) questions]

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

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

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

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