2022/12

SET B

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. A water soluble substance used as coating material in microencapsulation process is.
   a. Polyethylene
   b. Silicone
   c. Hydroxy ethyl cellulose
   d. Paraffin

2. Which of the following is a non- erodible insert?
   a. Ocusert
   b. Collagen shield
   c. NODS
   d. SODI

3. Chitosan is a _____ mucoadhesive polymer
   a. cationic
   b. anionic
   c. synthetic
   d. non-ionic

4. What is extrusion?
   a. pushing the heated material through an orifice
   b. producing a hole by a punch
   c. making cup shaped parts from the sheet
   d. process of mixing the ingredient

5. Which of the following is a semi synthetic polymer?
   a. Rubber
   b. HPMC
   c. Albumin
   d. Buna-R

6. It is the fraction of drug in an oil phase to that of an aqueous phase.
   a. pKa
   b. Permeation
   c. Dissolution
   d. Partition coefficient

7. By controlled release drug delivery systems bioavailability is..
   a. improved
   b. decreases
   c. Both a & b
   d. None

8. Drugs with therapeutic index are unsuitable for incorporation in controlled release formulation.
   a. High
   b. low
   c. Moderate
   d. None

9. The biological factor influencing the design and act of controlled release product is
   a. Partition coefficient
   b. Absorption
   c. Molecular size
   d. Solubility

10. It is not used as propellant.
    a. Trichlorofluoromethane
    b. Dichlorodifluoromethane
    c. Dichlorotetrafluroethane
    d. Hydroxy propyl methyl cellulose

11. Disadvantage of drug powder inhaler is.
    a. DPIs are small devices.
    b. Liberation of powders from the device and deaggregation of particles.
    c. DPIs are portable devices
    d. None of the above

12. Antioxidant used in nasal spray.
    a. Tocopherol
    b. Mannitol
    c. Glycerides
    d. Sorbitol

13. Ideal characteristics of targeted drugs delivery system.
    a. Non toxic and biodegradable
    b. Biocompatible and physically stable
    c. Predictable and controllable rate of drug release
    d. All of the above

14. Followings are the materials commonly used for bio adhesion except....
    a. Sodium alginate
    b. Tragacanth
    c. Sodium bicarbonate
    d. Chitosan

15. This is not the chemical permeation enhancer.
    a. Glycol
    b. Zein
    c. Alcohol
    d. Fatty acids

16. Niosomes are formulated by using---type of surface active agents.
    a. Cationic
    b. Non ionic
    c. Anionic
    d. Zwitter ionic

17. Which of these is not a step involved in coacervation phase separations technique?
    a. Formation of three immiscible phases
    b. Coat deposition
    c. Evaporations of solvent from the matrix material
    d. Coat rigidization

18. Solvent evaporation is which type of microencapsulation technique?
    a. Physical
    b. Chemical
    c. Physiochemical
    d. All of the above

19. In microencapsulation,Wurster process is used in..
    a. Polymerization
    b. Coacervation phase separation
    c. Spray drying
    d. Air suspension

20. The fundamental consideration for the formulation of microcapsules includes.
    a. Core materials
    b. Coating materials
    c. Vehicle
    d. All of the above

-- --- --

PART-B :Descriptive

Time : 2 hrs. 30 min. Marks : 35

[Answer any seven (7) questions]

1. Define microencapsulation. Write down its advantages and disadvantages. 5

2. Briefly explain the application of microencapsulation technique? 5

3. Define permeation enhancer with one example? Describe micro reservoir type TDDS? 1+4=5

4. Explain any two methods of preparation of liposome's. 5

5. Define nanoparticles. Write down its advantages and disadvantages? 4+1=5

6. Describe the biological factors affecting the design and act of controlled release products 5

7. Enlist and explain the barriers to ocular drug delivery system. 1+4=5

8. Classify polymers with examples. 5

9. Write a note on the anatomy of the skin with suitable diagram? 5

PART-C: Long type questions

[Answer any two (2) questions]

1. What are the mechanisms of drug action through nasal route? Write a note on the excipients used in the formulation of nasal spray using suitable examples 3+7=10

2. Explain the coacervation phase separation and Air suspension technique of microencapsulation. 5+5=10

3. Explain the preparation and applications of monoclonal antibodies. 5+5=10

-- --- --