

B. PHARM.
SEVENTH SEMESTER
NOVEL DRUG DELIVERY SYSTEM
BP704T [SPECIAL REPEAT]
[USE OMR SHEET FOR OBJECTIVE PART]

SET
A

Duration: 3 hrs.

Full Marks: 75

Time: 30 min.

(PART-A: OBJECTIVE)

Marks: 20

Choose the correct answer from the following:

1×20=20

1. It is not used as propellant.
 - a. Trichlorofluoromethane
 - b. Dichlorodifluoromethane
 - c. Dichlorotetrafluoroethane
 - d. Hydroxy propyl methyl cellulose
2. 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
3. Antioxidant used in nasal spray.
 - a. Tocopherol
 - b. Mannitol
 - c. Glycerides
 - d. Sorbitol
4. 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
5. Following are the materials commonly used for bio adhesion except....
 - a. Sodium alginate
 - b. Tragacanth
 - c. Sodium bicarbonate
 - d. Chitosan
6. This is not the chemical permeation enhancer.
 - a. Glycol
 - b. Zein
 - c. Alcohol
 - d. Fatty acids
7. Niosomes are formulated by using---type of surface active agents.
 - a. Cationic
 - b. Non ionic
 - c. Anionic
 - d. Zwitter ionic
8. 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

9. Solvent evaporation is which type of microencapsulation technique?
 - a. Physical
 - b. Chemical
 - c. Physiochemical
 - d. All of the above
10. In microencapsulation, Wurster process is used in..
 - a. Polymerization
 - b. Coacervation phase separation
 - c. Spray drying
 - d. Air suspension
11. The fundamental consideration for the formulation of microcapsules includes.
 - a. Core materials
 - b. Coating materials
 - c. Vehicle
 - d. All of the above
12. A water soluble substance used as coating material in microencapsulation process is.
 - a. Polyethylene
 - b. Silicone
 - c. Hydroxy ethyl cellulose
 - d. Paraffin
13. Which of the following is a non- erodible insert?
 - a. Ocusert
 - b. Collagen shield
 - c. NODS
 - d. SODI
14. Chitosan is a _____ mucoadhesive polymer
 - a. cationic
 - b. anionic
 - c. synthetic
 - d. non-ionic
15. 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
16. Which of the following is a semi synthetic polymer?
 - a. Rubber
 - b. HPMC
 - c. Albumin
 - d. Buna-R
17. 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
18. By controlled release drug delivery systems bioavailability is..
 - a. improved
 - b. decreases
 - c. Both a & b
 - d. None
19. The biological factor influencing the design and act of controlled release product is
 - a. Partition coefficient
 - b. Absorption
 - c. Molecular size
 - d. Solubility
20. Drugs with therapeutic index are unsuitable for incorporation in controlled release formulation.
 - a. High
 - b. low
 - c. Moderate
 - d. None

(PART-B : Descriptive)

Time : 2 hrs. 30 min.

Marks : 35

[Answer any seven (7) questions]

1. Define and state the advantages and disadvantages of micro encapsulation? 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. With appropriate examples, write the classification of polymers. 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