

**B. PHARM.
SEVENTH SEMESTER
NOVEL DRUG DELIVERY SYSTEM
BP704T**

**SET
A**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration : 3 hrs.

Full Marks : 75

(PART-A: Objective)

Time : 30 min.

Marks : 20

1×20=20

Choose the correct answer from the following:

- The particle size required for API in dry powder inhalers is ____
 - More than 5µm
 - Less than 5µm
 - Between 5 and 10µm
 - Less than 10µm
- The ____ pathway allows drugs to bypass the stratum corneum by entering through hair follicles and sweat glands.
 - Trans follicular
 - Trans epidermal
 - Transdermal
 - Transcellular
- For transdermal drug delivery, ____ drugs, which dissolve well in fats are more likely to be absorbed through the skin.
 - Hydrophilic
 - Lipophilic
 - Ionized
 - Charged
- The formula represents the floating force kinetics in FDDS is ____
 - $RW = (D_s - D_i) gV$
 - $RW = (D_r - D_s) gV$
 - $RW = D_i / (D_s \times g)$
 - $V_g (D_s - D_i)$
- The term 'mucoadhesion' refers to ____
 - Drug adhering to the mucus layer
 - Drug binding to the gastrointestinal tract
 - Drug releasing from polymers
 - Drug degrading in the stomach
- A non - ionic surfactant based multilamellar or unilamellar vesicular structure.
 - Microsphere
 - Liposome
 - Niosome
 - Nanoparticle
- The primary mechanism that allows non - effervescent FDDS to float is ____
 - Gas generation
 - Swelling polymer
 - Magnetic force
 - Chemical reaction
- ____ explains that the formation of an electric double layer at the mucoadhesive drug delivery.
 - Wetting theory
 - Electronic theory
 - Absorption theory
 - Cohesive theory
- Nasal sprays are commonly used to alleviate symptoms such as ____
 - Headache
 - Stomach ache
 - Nasal congestion
 - Back pain

10. A metered dose pump spray consists of a container, a pump with a valve and an _____.
 - a. Atomizer
 - b. Inhaler
 - c. Nebulizer
 - d. Actuator
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. ____ 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 T is effective for conception due to _____.
 - a. Progesterone
 - b. Oxytocin
 - c. Oestradiol
 - d. Copper
18. _____ is one of the most highly vascularized tissues of the body to supply the blood to retina.
 - a. Sclera
 - b. Cornea
 - c. Choroid
 - d. Retina
19. Which of the following is true about liposomes
 - a. No medical use
 - b. Used to deliver both lipophilic and hydrophilic drugs
 - c. Always harmful
 - d. All of the above
20. Following formulations would not be applicable to ocular administration
 - a. Solution
 - b. Suspension
 - c. Liniment
 - d. Ointment

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(PART-B :Descriptive)

Time : 2 hrs. 30 min.

Marks : 35

[Answer any seven (7) questions]

1. Define a controlled drug delivery system and outline its benefits and drawbacks. 1+4=5
2. Define polymers and discuss the various way to classify them in detail. 1+4=5
3. Explain the fundamental mechanism of bioadhesion. 5
4. Explain the basic components of a transdermal drug delivery system. 5
5. Write a note on liposomes. 5
6. Explain the applications of Intrauterine devices (IUD). 5
7. Describe the floating and inflated systems used for gastrointestinal drug delivery. 3+2=5
8. Explain about drug delivery system to anterior segment of the eye. 5
9. Define nebulizers and write down the different types of nebulizers. 1+4=5

PART-C: Long type questions

[Answer any two (2) questions]

1. Explain the Pan Coating method and Fluidized bed technology along with diagrams for each. 5+5=10
2. Explain the factors affecting of Transdermal drug delivery system 10
3. Describe various approaches to formulate dissolution and diffusion based on controlled drug delivery system. 5+5=10

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