

Reg. No. :

--	--	--	--	--	--	--	--	--	--

Question Paper Code: 59B04

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Elective

Biomedical Engineering

15UBM905 – DRUG DELIVERY SYSTEM

(Regulation 2015)

Duration: 1.15 hrs

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. What are the characteristics of continuous release systems? CO1- R
 - (a) Release the drug along the entire length of GIT
 - (b) Prolonged their residence in the GIT and release
 - (c) Release only at a specific drug
 - (d) Release as soon as comes in contact to the saliva

2. What is the characteristic of dissolution controlled release systems? CO1- R
 - (a) Release the drug along the entire length of GIT
 - (b) Prolonged their residence in the GIT and release
 - (c) Release only at a specific drug
 - (d) Very slow dissolution rate

3. What are the characteristics of ion exchange resin drug complexes? CO2- R
 - (a) Release the drug along the entire length of GIT
 - (b) Hollow systems containing drug surrounded by a polymer membrane
 - (c) Drug disperse in an insoluble matrix of rigid hydrophobic materials
 - (d) Formation of complexes between the drug and anion/cation exchange resins

4. What are the characteristics of hydrodynamic pressure controlled systems? CO2- R

- (a) Buffering agents that adjust pH to the desired value
- (b) Drug disperse in an insoluble matrix of rigid hydrophobic materials
- (c) Generated by swelling hydrophilic hum
- (d) Formation of complexes between the drug and anion/cation exchange resins
5. What does the word parenteral mean? CO3- R
- (a) taken orally
- (b) taken with supervision
- (c) taken without passing through the digestive system
- (d) taken rectally
6. Three different approaches for maintaining solid particles in a liquid are CO3- R
- (a) Stokes's law (b) flocculation
- (c) structured vehicle (d) All the above
7. Which of the following drugs cannot be given as transdermal administration? CO4- R
- (a) Drugs with very short half-lives (b) Drugs with narrow therapeutic indices
- (c) Easy removal and termination (d) Drugs against peptic ulcer
8. The absorption of the ophthalmic drug does not depend on which of the following? CO4- R
- (a) Physicochemical properties of the permeating molecule
- (b) Drainage of tears
- (c) Output of tears
- (d) Size of the eyeball
9. The body's natural immune system is used in which type of targeting CO5- R
- (a) Active (b) Passive (c) Physical (d) Dual
10. Organ compartmentalization is which type of targeting CO5- R
- (a) First order targeting (b) Second order targeting
- (c) Third order targeting (d) None of the aboveg

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Discuss in detail about physiochemical properties of drug molecule influencing the design and performance of sustained release drug delivery system CO1- U (8)
12. Discuss the design and development of oral controlled release drug administration CO2- U (8)
13. Explain the significance of photography and videography while examining the crime scene. CO3- U (8)
14. Explain the necessity of blood spatter analysis and steps involved in it. CO4- U (8)
15. Explain the role of modus operandi bureau in crime investigation of road accidents. CO5- U (8)