REV-01
BPH/05/10

2023/06

SET A

B. PHARM.
SIXTH SEMESTER
BIOPHARMACEUTICS & PHARMACOKINETICS
BP604T [REPEAT]

[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. When transport system require ATP, it is called _____
   a. Active b. Passive
   c. Paracellular d. None of the above
2. Pinocytosis transport comes under which one?
   a. Active b. Paracellular
   c. Vesicular d. Facilitated or mediated diffusion
3. Which of the following drug is extensively reabsorbed in tubular reabsorption phase?
   a. Lipid soluble drugs b. Water soluble drugs
   c. Polar drugs d. Hydrophilic drugs
4. Rate determination step for lipophilic drug is
   a. Disintergration b. Dissolution
   c. Permeation d. Gastric emptying time
5. Drugs for easy penetration, need partition coefficient ?
   a. High b. Moderate
   c. Low d. Negligible
6. Which is the highest level of IVIVC?
   a. Level A b. Level B
   c. Level C d. Multiple level C
7. In open compartment IV bolus method, clearance follows ?
   a. First order kinetics b. Second order kinetics
   c. Zero order kinetics d. None of the above
8. Which route of drug administration shows 100% bioavailability?
   a. Oral b. Intravenus
   c. Rectal d. Topical
9. Maximum plasma concentration obtained after extravascular administration is known as -
   a. Cmax b. Tmax
   c. DXU/dt d. AUC

10. X/C=_____?
    a. Vd
    b. Cl_T
    c. AUC
    d. None of the above

11. $T_{1/2}$=_____?
    a. 0.965/k
    b. 0.951/k
    c. 0.693/k
    d. 0.691/k

12. Wagner-nelson method is used for the estimation of ?
    a. K_a
    b. K_e
    c. V_d
    d. Clearance

13. In multi compartment model, the sharp decline of concentration on central compartment due to?
    a. Distribution
    b. Metabolism
    c. Elimination
    d. None of the above

14. In multi compartment model , elimination takes place from _____compartment.
    a. Peripheral
    b. Central
    c. Both (a) and (b)
    d. None of the above

15. Distributive phase takes place in _____ compartment.
    a. Peripheral
    b. Central
    c. Both (a) and (b)
    d. None of the above

16. Non linear Pharmacokinetics is also called as _____ ?
    a. First order kinetics
    b. Mixed order kinetics
    c. Zero order kinetics
    d. None of the above

17. Which of these is not a pharmacodynamic parameters?
    a. Onset of action
    b. Onset of time
    c. Therapeutics range
    d. Loading dose

18. Non compartment analysis is also called as
    a. Model independent
    b. Model dependent
    c. Mamillary model
    d. Catenary model

19. Frequency of administration of drug in a particular dose is
    a. Dose number
    b. Dose interaction
    c. Dose ratio
    d. Dose regimen

20. Ratio of maximum safe concentration to minimum effective concentration of drug is
    a. Therapeutic monitoring
    b. Therapeutic index
    c. Therapeutic equivalence
    d. Therapeutic window

-- --- --

PART-B :Descriptive

Time : 2 hrs. 30 min. Marks : 35

[Answer any seven (7) questions]

1. Discuss assumptions of one compartment open model. 5
2. Discuss the causes of non linearity 5
3. Write factors influencing GI absorption of a drug. 5
4. Discuss latin square design for cross over bioequivalence studies 5
5. Discuss types of compartment model with diagram and write three applications. 5
6. Discuss assumptions of two compartment open model with diagram. 5
7. Discuss acceptance criteria for dissolution testing of different dosage forms. 5
8. Discuss absorption of drugs from Non-per OS extravascular routes(mention only 5 route) 5
9. Discuss five methods for enhancement drug solubility 5

PART-C: Long type questions

[Answer any two (2) questions]

1. Discuss one compartment open model i.v. bolus. 10
2. Discuss Michaelis Menten menthod for estimating parameters. 10
3. Discuss method of residual for two compartment open model. 10

-- --- --