

**B. PHARM.  
SIXTH SEMESTER  
BIOPHARMACEUTICS & PHARMACOKINETICS  
BP604T**

**SET  
B**

[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. Wagner-nelson method is used for the estimation of ?
  - a.  $K_a$
  - b.  $K_e$
  - c.  $V_d$
  - d. Clearance
2. 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
3. In multi compartment model , elimination takes place from \_\_\_\_\_compartment.
  - a. Peripheral
  - b. Central
  - c. Both (a) and (b)
  - d. None of the above
4. Distributive phase takes place in \_\_\_\_\_ compartment.
  - a. Peripheral
  - b. Central
  - c. Both (a) and (b)
  - d. None of the above
5. Non linear Pharmacokinetics is also called as \_\_\_\_\_ ?
  - a. First order kinetics
  - b. Mixed order kinetics
  - c. Zero order kinetics
  - d. None of the above
6. Which of these is not a pharmacodynamic parameters?
  - a. Onset of action
  - b. Onset of time
  - c. Therapeutics range
  - d. Loading dose
7. Non compartment analysis is also called as
  - a. Model independent
  - b. Model dependent
  - c. Mamillary model
  - d. Catenary model
8. Frequency of administration of drug in a particular dose is
  - a. Dose number
  - b. Dose interaction
  - c. Dose ratio
  - d. Dose regimen
9. Ratio of maximum safe concentration to minimum effective concentration of drug is
  - a. Therapeutic monitoring
  - b. Therapeutic index
  - c. Therapeutic equivalence
  - d. Therapeutic window

10. When transport system require ATP, it is called \_\_\_\_\_
- Active
  - Passive
  - Paracellular
  - None of the above
11. Pinocytosis transport comes under which one?
- Active
  - Paracellular
  - Vesicular
  - Facilitated or mediated diffusion
12. Which of the following drug is extensively reabsorbed in tubular reabsorption phase?
- Lipid soluble drugs
  - Water soluble drugs
  - Polar drugs
  - Hydrophilic drugs
13. Rate determination step for lipophilic drug is
- Disintegration
  - Dissolution
  - Permeation
  - Gastric emptying time
14. Drugs for easy penetration, need partition coefficient ?
- High
  - Moderate
  - Low
  - Negligible
15. Which is the highest level of IVIVC?
- Level A
  - Level B
  - Level C
  - Multiple level C
16. In open compartment IV bolus method, clearance follows ?
- First order kinetics
  - Second order kinetics
  - Zero order kinetics
  - None of the above
17. Which route of drug administration shows 100% bioavailability?
- Oral
  - Intravenous
  - Rectal
  - Topical
18. Maximum plasma concentration obtained after extravascular administration is known as -
- C<sub>max</sub>
  - T<sub>max</sub>
  - DXU/dt
  - AUC
19.  $X/C = \text{_____?}$
- V<sub>d</sub>
  - Cl<sub>T</sub>
  - AUC
  - None of the above
20.  $T_{1/2} = \text{_____?}$
- 0.965/k
  - 0.951/k
  - 0.693/k
  - 0.691/k

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**PART-B : Descriptive**

Time : 2 hrs. 30 min.

Marks : 35

*[ Answer any seven (7) questions ]*

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|---|---|
| 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 ]*

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