Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 22

B.Pharma (2017 Batch) (Sem.-6)

BIOPHARMACEUTICS AND PHARMACOKINETICS-THEORY

Subject Code : BP-604T

M.Code : 77989

Time : 3 Hrs. Max. Marks : 75

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**
3. **SECTION-C contains NINE questions carrying FIVE marks each and students have to attempt any SEVEN questions.**

SECTION-A

Write briefly :

1. What is meant by active secretion?
2. What is relative bioavailability?
3. Name plasma proteins responsible for drug - protein binding.
4. How is elimination half-life of a drug calculated from slope of elimination phase?
5. What is renal clearance and how is it calculated?
6. What is meant by very high Vd?
7. Mention four reasons for reduced oral bioavailability of drugs.
8. Mention the non-renal routes of drug elimination.
9. Draw the plasma – time curve for oral administration of drug for one compartment open model kinetics.
10. What is Pinocytosis?

SECTION-B

11. Give a detailed account of the physiological factors influencing drug absorption.

12. Comment on factors affecting renal clearance of drugs.

13. What is meant by non-linear pharmacokinetics? Discuss the factors responsible for non-linear pharmacokinetics of drugs.

SECTION-C

14. Write briefly about facilitated and active transport of drugs.

15. Explain with the help of suitable equations the pharmacokinetics of a drug in plasma after IV administration that follows one compartment open model.

16. Discuss the regulatory considerations pertaining to bioequivalence studies in India.

17. Write briefly about protein binding of drugs.

18. What is Sigma-Minus method? Explain the method of calculating elimination rate constant by this method with the help of suitable equations.

19. Discuss the phase – I reactions for drug metabolism.

20. Write a note on the approaches used for enhancing solubility and dissolution rates of poorly water soluble drugs.

21. Comment on in vitro – in vivo correlations.

22. Discuss the role of pKa of drug and pH of biological fluid in drug absorption.

NOTE : Disclosure of identity by writing mobile number or making passing request on any page of Answer sheet will lead to UMC against the Student.