

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**

**End Semester Examination – Summer 2023**

**Monday, Date: 17-07-2023**

**Course- B. Pharmacy**

**Sem-VI**

**Subject Name- Biopharmaceutics & Pharmacokinetics**

**Subject code- BP604T**

**Max. Mark- 75**

**Duration-3 hrs**

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**Instructions:**

- 1. All questions are compulsory**
  - 2. Draw diagrams / figures wherever necessary**
  - 3. Figures to right indicate full marks**
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**(10 x 2) = 20**

**Q. 1. Objective Type Questions (Answer all the questions)**

- i) Define i) Absorption ii) Distribution.
- ii) Define Volume of Distribution
- iii) Why there is need of Biotransformation.
- iv) Enlist Dissolution test apparatus according to USP.
- v) Define i) C<sub>max</sub> ii) T<sub>max</sub>.
- vi) Compare between Plasma protein binding & Tissue binding.
- vii) Draw a presentation for One compartment first order absorption model for extravascular route of administration.
- viii) Explain mixed order kinetics.
- ix) Draw a presentation for Two compartment open model for intravenous Infusion.
- x) Explain Zero order Kinetics.

**Q. 2. Long Answers (Answer 2 out of 3)**

**(5x10) = 20**

- i) Explain nonlinearity, methods to determine nonlinearity & causes of nonlinearity.
- ii) Explain one compartment open model for intravenous infusion.
- iii) Explain factor influencing drug absorption of drug.

**Q. 3. Short Answers (Answer 7 out of 9)**

**(7x5) = 35**

- i) Explain methods of measurement of Bioavailability.
- ii) Explain mechanism of drug absorption.
- iii) Explain chemical pathways of drug biotransformation.
- iv) Explain one compartment open model for intravenous injection.

- v) Explain Mammillary model
- vi) Write a note on protein binding of drugs.
- vii) Explain kinetics of multiple dosing.
- viii) Explain renal clearance with factors affecting renal clearance.
- ix) Explain factor affecting distribution of drug.

**-----END OF THE PAPER-----**