



Seat No. _____

HQ-BP604T

M. P. M. (Sem.-VI) (WEF-2017) Examination

April - 2023

Biopharmaceutics and Pharmacokinetics Theory

Time : 3 Hours / Total Marks : 75

- Instructions :**
- (1) Figures to the right indicate marks.
 - (2) Draw neat & clean diagrams as required.

1 Answer the following questions. **20**

- (1) Define : Biopharmaceutics & Pharmacokinetics
- (2) Write Modified Noyes Whitney equation.
- (3) What is the difference between relative and absolute bioavailability?
- (4) Enlist Mechanism of Drug Absorption.
- (5) Write down the objective of Bioavailability.
- (6) Define: Loading Dose and Maintenance Dose.
- (7) Give the objectives of Dissolution Profile Comparison.
- (8) What is ADME? Define: Pharmacokinetics.
- (9) Comment: Saturation affects the passive diffusion absorption process.
- (10) Write about the physiological barriers to distribution of the drug.

2 Answer the following questions. (ANY TWO) **20**

- (1) Explain One Compartment open model IV Bolus administration with estimation of Pharmacokinetics Parameters.
- (2) Describe the Factors affecting Absorption of Drug.
- (3) Define bioavailability and explain different methods for measurement of bioavailability.

3 Answer the following questions. (ANY SEVEN)

35

- (1) Give detailed note on Factors causing Non-linearity.
 - (2) Write a note on Nonrenal routes of drug excretion.
 - (3) Describe the theories of Drug Dissolution.
 - (4) Explain Residual Method for estimation of K_a .
 - (5) Give the Applications of Pharmacokinetic Models.
 - (6) Describe Two-Compartment Open Model IV Infusion.
 - (7) Explain Michaelis-menton method of estimating parameters.
 - (8) Write a note on In-vitro-in-vivo correlations.
 - (9) Discuss the passive transport mechanism of absorption of drugs.
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