THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[B.PHARM 0323] MARCH 2023 Sub. Code: 2065
(SEPTEMBER 2022 EXAM SESSION)

B.PHARMACY DEGREE COURSE (SEMESTER EXAMINATIONS)
PCI Regulation 2017 – SEMESTER VI
PAPER IV – BIOPHARMACEUTICS AND PHARMACOKINETICS

Q.P. Code: 562065

Time: Three hours **Maximum: 75 Marks**

I. Elaborate on: Answer any TWO questions. (2 x 10 = 20)

1. Explain the role of physiological barriers to drug distribution.
2. Describe the kinetics of dose dependent model with the help of an equation.
3. Detail the principle mechanism of transportation of drug molecule across various membranes.

II. Write notes on: Answer any SEVEN questions. (7 x 5 = 35)

1. Draw a plasma drug concentration Vs time profile and mention all possible kinetic parameters.
2. Explain the concept of clearance.
3. Kinetics of protein binding.
4. Tissue binding of drug.
5. Theories of drug dissolution.
6. First pass metabolism.
7. Apparent volume of distribution.
8. Outline in brief about various of pharmacokinetic models.
9. Note on tubular reabsorption.

III. Short answers on: Answer ALL questions. (10 x 2 = 20)

1. Endocytosis.
2. Bioequivalence.
3. C_{max} and $T_{max.}$
4. Capacity limited kinetics.
5. Absolute bioavailability.
6. BCS classification.
7. Recite a simple block diagram of one and two compartment model.
8. Tissue binding and its effect.
9. Equate the rate of excretion.
10. Recall Phase I and II reactions.

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