

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

[MPHARM 0921]

SEPTEMBER 2021  
(OCTOBER 2020 EXAM SESSION)

Sub. Code: 2936

M.PHARMACY DEGREE EXAMINATION  
SEMESTER-II (PCI New regulations 2016)  
PHARMACEUTICS - MPH  
PAPER II – ADVANCED BIOPHARMACEUTICS AND PHARMACOKINETICS  
*Q.P. Code : 262936*

Time : Three hours

Answer ALL Questions

Maximum : 75 Marks

**I. Elaborate on:**

(2 x 20 = 40)

1. Discuss in detail the biopharmaceutical considerations in designing the drug product, add a note on *in vitro* drug product performance using suitable methods.
2. a) Detail note about methods to determine the bioavailability.  
b) What are compartment models? Derive an expression for calculating various pharmacokinetic parameters for a drug administered by IV bolus administration.

**II. Write notes on:**

(7 x 5 = 35)

1. Define dose-dependent kinetics. Give some tests to detect the same in a rate process.
2. Explain pH partition hypothesis.
3. *In vitro-in vivo* correlation.
4. Bioequivalence testing.
5. Compendial methods of drug dissolution.
6. Drug food interactions.
7. Applications of pharmacokinetics on modified Release drug products.

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