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Total Number of Pages : 01

M.Pharm.
M.PH2D.1

2nd Semester Regular / Back Examination 2017-18
PHARMACOKINETICS AND DRUG METABOLISM
BRANCH : PHARMACOLOGY

Time : 3 Hours

Max Marks : 70

Q.CODE : C820

Answer Question No.1 which is compulsory and any five from the rest.

The figures in the right hand margin indicate marks.

Answer all parts of a question at a place.

- Q1 Answer the following questions: *Short answer type:* (2 x 10)**
- a) Define the term 'bioavailability' and 'bioequivalence'.
 - b) What is the advantage of drug administered in sublingual route?
 - c) Define the term 'prodrug' with suitable examples.
 - d) Define plasma half-life ($t^{1/2}$). What is its significance?
 - e) Write the importance of plasma protein binding.
 - f) Write the consequence of microsomal enzyme inhibition.
 - g) Give example of two active drugs having active metabolite.
 - h) Quinidine decreases renal clearance of digoxin. Justify.
 - i) Give example of two drugs excreted through exhaled air.
 - j) Name some environmental factors that induce drug metabolism.
- Q2 Write short notes on :**
- a) Transfer of drug through blood brain barrier. (5)
 - b) First pass metabolism (5)
- Q3 Explain drug absorption by passive diffusion. Discuss about various factors affecting absorption of drugs. (5+5)**
- Q4 Write short notes on :**
- a) Processes that determine urinary excretion of drug. (5)
 - b) Factors affecting renal clearance of drug. (5)
- Q5 What is apparent volume of distribution? Discuss various factors affecting drug distribution. (3+7)**
- Q6 Define biotransformation. Briefly explain various physicochemical and physiological factors affecting metabolism. (2+8)**
- Q7 Write short notes on :**
- a) Passage of drug across placental barrier. (5)
 - b) Phase-I metabolic reactions. (5)
- Q8 Answer the followings :**
- a) Glucuronide conjugation (2.5 x 4)
 - b) Microsomal enzyme induction.
 - c) Excretion of drug through milk.
 - d) Factors affecting bioavailability of drug.