MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

SECOND YEAR SECOND SEMESTER EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN MEDICAL LABATORY SCIENCE WITH INFORMATION TECHNOLOGY

(MAIN CAMPUS)

PMT 217: GENERAL PHARMACOLOGY

Date: *31st March, 2014* ***Time:*** *5.30 – 7.30pm*

SECTION A **TIME: 2HRS**

INSTRUCTIONS: ANSWER ALL QUESTIONS [4 MARKS EACH]

1. Define
   a) and give the equation of Pharmacokinetic drug *Half Life*
   b) Pharmacokinetics
2. List the factors that influence Drug absorption
3. State the effect of *lipid solubility* on drugs
4. State effect of pK_a on Drug distribution
5. Explain the role of *recepiors* to drug BIOAVAILABILITY
6. Outline the factors that influence *Drug transfer* across Compartments
7. Explain the *Drug-Dose Response* curve
8. Differentiate *Cholinergics* from *adrenergics*
9. Explain effect of Illustrate the difference between *Uncompetitive* and *Non-competitive* Drug inhibition

SECTION B

INSTRUCTIONS: ANSWER THREE QUESTIONS ONLY (10 MARKS EACH)

1. Explain the difference between *Parasympathetic* and *Sympathetic* tone
2. Discuss the *distribution* of a specific low pKa Drug compared to a specific high pKa Drug in a low pH environment.

3. The (Base) Quinine (pK_a 8.4) and Thiopental (Acid) pK_a 8.2 are introduced into the stomach during hunger. Explain the *bioavailability profile* of the above two drugs in this gastric environment.

4. Drug abuse is confined to several Classes of drugs. Explain the *effects* arising from the use of these classes of drugs and give one example in each class.
5. Discuss the *diabetogenicity* of Sympathetic stimulant Drugs using a specific drugs as an example.