



MASEÑO UNIVERSITY
UNIVERSITY EXAMINATIONS 2013/2014

**SECOND YEAR FIRST SEMESTER EXAMINATIONS FOR THE
DEGREE OF BACHELOR OF SCIENCE IN PHARMACEUTICAL
SCIENCE, BACHELOR OF SCIENCE IN MEDICAL
BIOTECHNOLOGY AND BACHELOR OF SCIENCE IN MEDICAL
LABORATORY SCIENCE WITH INFORMATION TECHNOLOGY
(MAIN CAMPUS)**

PMT 217: GENERAL PHARMACOLOGY

Date: 28th November, 2013

Time: 11.00 a.m. - 1.00 p.m.

SECTION A (40 MARKS): ATTEMPT ALL QUESTIONS

1. Explain the following terms as use in the description of drug responses (2 marks each)
 - a. Idiosyncratic response
 - b. Tachyphylaxis
 - c. Tolerance
2. Define the following parameters as used in describing the pharmacokinetic profile of drugs (2 marks each)
 - a. Volume of distribution
 - b. Bioavailability
 - c. Clearance
3. Describe the modes of action of the following classes of drugs
 - a. Directly acting cholinomimetics (4 marks)
 - b. Indirectly acting cholinomimetic agents (4 marks)
4. Explain the following processes with regard to drug metabolism
 - a. Phase 1 reactions (5 marks)
 - b. Phase 2 reactions (5 marks)
5. List the advantages and the disadvantages of the following routes of drug administration
 - a. Intravenous route(4 marks)
 - b. Oral route (4 marks)
 - c. Rectal route (2 marks)

SECTION B (30 MARKS) : ATTEMPT ANY TWO QUESTIONS

- 1) A) Describe the mode of action of the non-steroidal anti-inflammatory drugs (NSAIDS) (6 marks)
 - b) explain the therapeutic uses and adverse effects of the NSAIDS (4 marks)
 - c) Discuss the rationale behind the development of COX II selective non-steroidal anti-inflammatory drugs (5 marks)
- 2) A farmer sprays his crops with a pesticide parathion. He is admitted a few hours later with signs and symptoms of poisoning
 - a) List at least 4 signs and symptoms the farmer presented with (4 marks)
 - b) Explain the mechanism of toxicity of parathion (5 marks)
 - c) Outline the pharmacologic management of this patient (6 marks)
- 3) The autonomic nervous system is an important site for drug action. Explain , giving appropriate examples how drug can alter the following processes (15 marks)
 - a) Neurotransmitter synthesis
 - b) Neurotransmitter storage and release
 - c) Neurotransmitter interaction with receptors
 - d) Neurotransmitter metabolism