



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PURE & APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR:

BTMB

ABT4410: BIOCHEMICAL PHARMACOLOGY

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 2 HOURS

DATE: 10 Mar 2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of 5 questions. Attempt question ONE compulsory and any other two questions.

Do not write on the question paper.

Question ONE

- a. Define the following terms
- i) Lead compound **(1mark)**
 - ii) Agonist **(1mark)**
 - iii) Pharmacology **(1mark)**
 - iv) Pharmacokinetics **(1mark)**
 - v) Ligand **(1mark)**
- b. Explain the major types of drug antagonism **(4 marks)**
- c. Draw the chemical structures of the following drugs showing the active sites
- i) Epinephrine **(2 marks)**
 - ii) Norepinephrine **(1marks)**
 - iii) Remikren **(2 marks)**

- d. Distinguish between reversible and irreversible drug interactions **(3 marks)**
- e. Explain two factors influencing metabolism of drugs **(4 marks)**
- f. State four advantages of oral route of drug administration **(4 marks)**
- g. Explain the pharmacological processes **(5 marks)**

Question TWO

Describe the drug discovery process **(20 marks)**

Question THREE

Describe biotransformation reactions in drug metabolism **(20 marks)**

Question FOUR

- i) Describe the classical model of drug distribution and eliminations **(10 marks)**
- ii) Discuss first order and zero order process in drug absorption and elimination **(10 marks)**

Question FIVE

- i) Discuss the mechanism of increased blood pressure following angiotensin degradation .
(15marks)
- ii) Explain the mechanism of action of Remikren in reduction of blood pressure
(5 marks)