

**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2015/2016**

**YEAR SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN**

**HBB 2400: METABOLISM IN MAMMALIAN TISSUES**

**DATE:DECEMBER 2015 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS.**

QUESTION ONE

a. Define the following terms.

 i. Metabolism. (3 marks)

 ii. Metabolic pathway. (3 marks)

 iii. Collision theory. (3 marks)

 iv. Rate determining reaction step (2 marks)

b. i. Explain the term equilibrium. (3 marks)

 ii. Briefly explain three stress/factors affecting equilibrium. (3 marks)

c. Briefly explain the following terms as used in enzyme regulation

 i. Allosteric regulation. (3 marks)

 ii. Covalent modification. (4 marks)

QUESTION TWO

Briefly explain four factors affecting reaction rates. (20 marks)

QUESTION THREE

Briefly explain liver metabolism. (20 marks)

QUESTION FOUR

Discuss Glycolysis metabolic pathway. (20 marks)