

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

## JOMO KENYATTA UNIVERSITY

**OF**

**AGRICULTURE AND TECHNOLOGY**

# UNIVERSITY EXAMINATIONS 2015/2016

**FIRST YEAR SECOND SEMESTER EXAMINATION FOR THEDEGREE OF**

**BACHELOR OF SCIENCE IN BIOCHEMISTRY AND MOLECULAR BIOLOGY/**

**MEDICAL BIOCHEMISTRY**

**HBB 2305: MEDICAL BIOCHEMISTRY I**

**DATE: APRIL 2016 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE (COMPULSORY) AND ANY**

**OTHER TWO QUESTIONS**

**QUESTION ONE (30 MARKS)**

1. Briefly describe the causes of disorders associated with

vitamin D deficiency. [6 marks]

1. Write brief notes on the following:
2. Tyrosinemia [5 marks]
3. Galactosemia [5 marks]
4. Tay Sachs disease [5 marks]
5. Discuss the functions of niacin and the effects of its deficiency.[5 marks]
6. State the roles of nitric oxide in the body. [4 marks]

**QUESTION TWO (20 MARKS)**

Discuss the clinical significance of the following enzymes:

1. Alkaline Phosphatase [5 marks]
2. Aspqrtate amino transferase [5 marks]
3. Creatine kinase [5 marks]
4. Lactate dehydrogenase [5 marks]

**QUESTION THREE (20 MARKS)**

1. Describe renal function tests and their significance. [10 marks]
2. Discuss four disorders associated with amino acid metabolism.

[10 marks]

**QUESTION FOUR (20 MARKS)**

Discuss the various types of hemoglobinopathies. [20 marks]