

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

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2015/2016**

**YEAR IV SEMESTER I EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN INDUTRIAL BIOTECHNOLOGY**

**HBB 2405: PROTEINS FOR DIAGONOSIS**

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

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

QUESTION ONE (30 MARKS)

a. Enumerate the potential advantages and disadvantages of probe assays in diagnosis of infectious diseases. (6 marks)

b. Write brief notes on the following:

i. Enzyme as drug or antibiotics (6 marks)

ii. Enzyme as markers for diseases. (6 marks)

c. Briefly describe the following as applied in glucose measurement.

i. Sample source. (3 marks)

ii. Sample type. (3 marks)

d. Enumerate the medical and biochemical importance of triglycerides assays.

(3 marks)

e. Briefly explain tagging of DNA. (3 marks)

QUESTION TWO (20 MARKS)

a. Explain the key issues that are considered before adopting DNA probe technology in the diagnostic laboratory. (7 marks)

b. Describe in details two types of nanopores employed in DNA sequencing. (13 marks)

QUESTION THREE (20 MARKS)

Discus any five enzymes applied in diagnostic pathology.

QUESTION FOUR (20 MARKS)

Give detailed accounts of the following

a. Application of immobilized enzymes. (6 marks)

b. Enzymatic techniques of determining blood glucose level. (14 marks)