

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

## JOMO KENYATTA UNIVERSITY

**OF**

**AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2016/2017**

**EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN PHARMACY**

**MMB 2445: DISCOVERY STRATEGIES IN BIOTECHNOLOGY**

**DATE: JUNE 2017 TIME: 3 HOURS**

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

**QUESTION ONE (30 MARKS)**

a) Define natural products and describe the approaches used to classify them (6 marks)

b) Highlight the 6 major functions of proteins within living organisms

(6 marks)

c) Compare and contrast between genomics and proteomics as used in biotechnology (6 marks)

d) Describe the processes involved in recombinant DNA technology

(6 marks)

e) Define the following tems;

i) Biogeography (1 mark)

ii) Transgenic organisms (1 mark)

iii) Restriction enzymes (1 mark)

iv) Ecosystem (1 mark)

v) Proteome (1 mark)

vi) Bioinformatics (1 mark)

QUESTION TWO (20 MARKS)

a) Discuss the different molecular techniques that are used during isolation and characterization of microorganisms (10 marks)

b) Discuss any three existing measures put in place for conserving Biodiversity in Kenya (10 marks)

QUESTION THREE (20 MARKS)

Discuss various intellectual property rights and the objectives of the intellectual property law (20 marks)

QUESTION FOUR (20 MARKS)

Discuss various bioinformatics applications in biotechnology (20 marks)