

W1-2-60-1-6

**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2016/2017**

**SPECIAL/SUPPLIMENTARY EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN MICROBIOLOGY**

**MMB 2445: DISCOVERY STRATEGIES IN BIOTECHNOLOGY**

**DATE: SEPTEMBER 2017 TIME: 2 HOURS**

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

**QUESTION ONE (30 MARKS)**

1. Outline the SIX steps involved during separation and isolation of DNA of interest in biotechnology. [6 marks]
2. Briefly describe the importance of biodiversity in biotechnology. [6 marks]
3. Highlight the significance of microbial biodiversity conservation. [6 marks]
4. Explain briefly why it is important to promote and protect intellectual property. [6 marks]
5. Differentiate between genomics, proteomics and metabolomics. [6 marks]

**QUESTION TWO (20 MARKS)**

Discuss the principles and processes used in biotechnology. [20 marks]

**QUESTION THREE (20 MARKS)**

1. Discuss the classification of natural products. [10 marks]
2. Briefly describe the various approaches used in finding new and potential. [10 marks]

**QUESTION FOUR (20 MARKS)**

“Biogeography is used as a tool in bioprospecting”. Discuss [20 marks]