

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATIONS**

**EXAMINATION FOR THE AWARD OF DEGREE OF MASTER OF  
BIOTECHNOLOGY AND BIOINFORMATICS**

**MICB 860/804: BIOTECHNOLOGY AND BIOINFORMATICS**

**STREAMS: MSC (MICROBIO AND BIOTECH) MSC (PLANT PATHOLOGY)**

**TIME: 3**

**HOURS**

**DAY/DATE: THURSDAY 08/04/2021**

**8.30 A.M – 11.30 A.M**

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**INSTRUCTIONS:**

**Answer any three questions**

1. (a) Discuss bioinformatics databases and their role in biotechnology. [5 marks]  
(b) Discuss the application of biotechnology in agriculture and industries. [15 marks]
2. (a) Discuss the tools of molecular biology. [10 marks]  
(b) Discuss the application of protein engineering. [10 marks]
3. (a) Discuss the process of micro propagation of plants. [10 marks]  
(b) Discuss the types of molecular markers. [10 marks]
4. Discuss down stream processing of fermentation products. [20 marks]
5. (a) Describe the applications of DNA sequencing. [5 marks]  
(b) Discuss the ethical issues emanating from genetically modified organisms. [5 marks]
- (c) Describe the process of patenting a product of biotechnology in Kenya. [10 marks]

