



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)**

(MAIN CAMPUS)

**UNIVERSITY EXAMINATIONS  
2021/2022 ACADEMIC YEAR**

**END OF SECOND SEMESTER  
EXAMINATIONS**

**FOR THE MASTER OF SCIENCE  
IN**

**MEDICAL BIOTECHNOLOGY**

**COURSE CODE: BMB 824**

**COURSE TITLE: BIOINFORMATICS**

**DATE: 22/04/2022**

**TIME: 8:00-11:00 AM**

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**INSTRUCTIONS:**

**ANSWER ALL QUESTIONS IN THIS EXAMINATION**

**USE DIAGRAMS IN YOUR EXPLANATIONS, WHENEVER APPLICABLE**

**TIME: 2 HOURS**

MMUST observes ZERO tolerance to examination  
cheating

This Paper Consists of 2 Printed Pages. Please Turn Over

1. Discuss bioinformatics in the context of gene annotation and functional prediction **(25 marks)**
2. Discuss the **BLAST (basic local alignment search tool) algorithm** **(25marks)**
3. Discuss the use of bioinformatics in analysis of gene expression, regulation and cellular organisation **(25 marks)**
4. Discuss the main features of the GenoCad **(25 marks)**