



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

**UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR**

**MAIN EXAMINATIONS
MAIN CAMPUS**

**SECOND YEAR SECOND SEMESTER EXAMINATIONS
FOR THE DEGREE
OF
BACHELOR OF SCIENCE IN BIOCHEMISTRY**

**COURSE CODE: SBM 223
COURSE TITLE: METABOLIC INTEGRATION AND
REGULATION**

DATE: WEDNESDAY, 20TH APRIL 2022 TIME: 12:00 – 2:00 P.M.

INSTRUCTIONS TO CANDIDATES

Answer ANY FOUR questions

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over. 

1. Gluconeogenesis is not the reverse of glycolysis. Explain. (17.5 marks)

2. Each of the several metabolic pathways is intertwined with all the other cellular pathways in a multi-dimensional network of reactions. Discuss with the help of a suitable example. (17.5 marks)

3. Discuss the factors that determine the activity of an enzyme. (17.5 marks)

4. Discuss the role of ADP and ATP in the regulation of metabolism. (17.5 marks)

5. With the help of a suitable example, describe the role of hormones in metabolic regulation. (17.5 marks)

6. Describe the role of Xylulose -5- Phosphate in carbohydrate and fat metabolism. (17.5 marks)