



*(Knowledge for Development)*

**KIBABII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**  
**2021 / 2022 ACADEMIC YEAR**

**SECOND YEAR FIRST SEMESTER**  
**MAIN EXAMINATIONS**

**FOR THE DEGREE OF BACHELOR OF EDUCATION SCIENCE**

**COURSE CODE:** SBL 222 / SBT 122

**COURSE TITLE:** GENERAL MICROBIOLOGY

**DATE:** 17<sup>TH</sup> MAY 2022


**TIME:** 2.00 – 5.00 PM

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**INSTRUCTIONS TO CANDIDATES**

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 3 printed pages. Please Turn Over   
KIBU observes ZERO tolerance to examination cheating

### **Question One**

- a) Define the following terms in relation to industrial fermentation (5 marks)
- i. Bioreactor
  - ii. Enzymes
  - iii. Amylase
  - iv. Fermentation
  - v. Fermenter
- b) State the major contributions of Louis Pasteur in 1860s (5 marks)
- c) State 5 general characteristics of fungi (5 marks)
- d) State the major functions of the cytoplasmic membrane of a bacteria (5 marks)
- e) Differentiate between prokaryotes and eukaryotes (5 marks)
- f) Explain factors that affect cleaning and disinfection success in regard to sanitation in agriculture (5 marks)
- g) State various diseases caused by microorganisms in relation to sanitation and public health microbiology (5 marks)

### **Question two**

Discuss the wide range of industrial fermentation products and applications (20 marks)

### **Question three**

Discuss physical factors for bacterial growth (20 marks)

### **Question four**

Classify the types of culture media citing their uses and examples under each class (20 marks)

### **Question five**

Discuss methods of sterilization (20 marks)