



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

AUGUST – DECEMBER 2017 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF BIOLOGY

REGULAR PROGRAMME

BIO 305: GENERAL MICROBIOLOGY

Date: DECEMBER 2017

Duration: 2 Hours

INSTRUCTIONS: Answer Question ONE and any other TWO Questions

- Q1. a) Briefly explain the two types of cells that exist among microbes **(2 marks)**
- b) List and explain the Kochs postulates **(3 marks)**
- c) Briefly discuss the six major stages involved in viral replication **(3 marks)**
- d) Briefly discuss the classes in which microbes are classified based on their requirements for energy, electron and carbon **(5 marks)**
- e) Explain microbial iron uptake **(5 marks)**
- f) List and explain the 3 major types of food decay **(3 marks)**
- g) Briefly discuss bio-preservation **(3 marks)**
- h) List and explain three industrial application of microbes **(3 marks)**
- i) Explain negative nutritional effect of cheese **(3 marks)**
- Q2. With the aid of diagrams discuss characteristics of a gram positive and a gram negative bacterium **(20 marks)**
- Q3. Discuss environmental factors affecting microbial growth **(20 marks)**
- Q4. Discuss food-borne infection and food-borne intoxication **(20 marks)**

Q5. Discuss basic principles involved in disinfection and sterilization (20 marks)

END