



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

A. M. E. C. E. A

MAIN EXAMINATION

JANUARY – APRIL 2015 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF NATURAL SCIENCES (BIOLOGY)

REGULAR PROGRAMME

BIO 213: TECHNIQUES IN INDUSTRIAL MICROBIOLOGY

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Date: April 2015	Duration: 2 Hours
Instructions: Answer Question ONE and any other TWO Questions.	

- Q1. a) Explain the following types of fermentation processes.
i) Batch fermentation
ii) Continuous fermentation **(4 marks)**
- b) State the properties of useful industrial micro-organisms. **(3 marks)**
- c) Briefly discuss FOUR types of culture media. **(4 marks)**
- d) Discuss factors that affect bio-remediation. **(6 marks)**
- e) i) Define industrial microbiology. **(1 mark)**
ii) Discuss FOUR industrial products of micro-organisms. **(8 marks)**
- Q2. State and explain the methods of microbe preservation. **(20 marks)**
- Q3. Discuss the steps involved in wine production. **(20 marks)**
- Q4. Discuss the characteristics of an ideal fermentation medium. **(20 marks)**
- Q5. Discuss physical and chemical methods used to control micro-organisms. **(20 marks)**

END