# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

## A. M. E. C. E. A

### MAIN EXAMINATION

P.O. Box 62157 00200 Nairobi - KENYA Telephone: 891601-6 Fax: 254-20-891084 E-mail:academics@cuea.edu

### JANUARY – APRIL 2015 TRIMESTER

### **FACULTY OF SCIENCE**

## **DEPARTMENT OF NATURAL SCIENCES (BIOLOGY)**

#### **REGULAR PROGRAMME**

**BIO 213: TECHNIQUES IN INDUSTRIAL MICROBIOLOGY** 

Date: April 2015 **Duration: 2 Hours** Instructions: Answer Question ONE and any other TWO Questions. Q1. Explain the following types of fermentation processes. Batch fermentation ii) Continuous fermentation (4 marks) b) State the properties of useful industrial micro-organisms. (3 marks) Briefly discuss FOUR types of culture media. c) (4 marks) Discuss factors that affect bio-remediation. d) (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\*