



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

JANUARY – APRIL 2017 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF BIOLOGY

REGULAR PROGRAMME

BIO 315: Food Science and Technology

Date: April 2017

Duration: 2 Hours

INSTRUCTIONS: Answer Question ONE and any other TWO Questions

- Q1. a) Explain ways in which natural toxicants in food are normally reduced **(4 marks)**
- b) List any three pathogenic bacteria that can be eliminated by temperature **(3 marks)**
- c) Describe the three phases of toxicological effects **(6 marks)**
- d) Explain three objectives of food preservation **(3 marks)**
- e) Highlight three draw backs associated with food processing **(3 marks)**
- f) Explain the significance of quantifying COD and BOD in food industry **(4 marks)**
- g) Describe four environmental contaminants that are likely to enter the food chain **(4 marks)**
- h) Explain the roles played by national government in enforcing food safety regulations **(5 marks)**
- i) Mention two draw backs associated with two food additives **(2 marks)**

- Q2. a) Discuss the principles of HACCP (14 marks)
- b) Explain principle behind any three chemical food preservation methods (6 marks)
- Q3. a) Discuss five reasons why there is need of packaging (10 marks)
- b) Outline five packaging materials and in each case discuss their advantages and disadvantage (10 marks)
- Q4. a) Discuss the role played by enzymes in at least five food industries (15 marks)
- b) Explain role played by five functional foods (5 marks)
- Q5. a) Discuss three key points to consider when purchasing a food processing equipment (15 marks)
- b) Describe five major technological innovations that food processing factories should follow (5 marks)

END