



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

AUGUST - DECEMBER 2015 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF BIOLOGY

REGULAR PROGRAMME

BIO 411: FOOD SCIENCE AND TECHNOLOGY II

Date: DECEMBER 2015

Duration: 3 Hours

INSTRUCTIONS: Answer Question ONE and ANY other THREE Questions

- Q1. a) Name and explain the role of the corresponding coenzyme in each of the following vitamins
- i Thiamine (B)
 - ii Nicotinic acid
 - iii Cobalamin
- b) Describe FOUR proteins important for transport in the body and in each mention substance that is transported. **(4 marks)**
- c) Explain FOUR factors influencing rate of lipid oxidation in food. **(4 marks)**
- d) Explain and name FOUR proteases used in food industry. **(4 marks)**
- e) Differentiate food emulsions from colloids. **(4 marks)**
- f) Discuss FIVE functions of acids in food. **(5 marks)**
- g) Describe THREE forms of water. **(6 marks)**
- Q2. a) Discuss enzymatic and non enzymatic browning reactions in food and how they can be prevented. **(20 marks)**

- Q3. a) You are considering the use of a new method to measure compound x in your food product. List SIX factors you will consider before adopting this new method in your quality assurance laboratory. **(12 marks)**
- b) Identify FOUR factors that one would need to consider when choosing a moisture analysis method for a specific food product. **(8 marks)**
- Q4. a) Explain using THREE points why protein analysis is important. **(3 marks)**
- b) Describe the principle of ultraviolet 280nm absorption method in protein analysis and show its advantage and disadvantages. **(17 marks)**

END