# 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 browing 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***