

CHUKA



UNIVERSITY

RESIT /SPECIAL EXAMINATION

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN
FOOD SCIENCE AND TECHNOLOGY**

FOST 323: FOOD CHEMISTRY II

STREAMS: Y3S1

TIME: 2 HOURS

DAY/DATE: MONDAY 01/11/2021

8.30 A.M – 10.30 A.M

INSTRUCTIONS:

Answer all question in section A and any Two in section B

SECTION A

1. a) Classify the essential mineral elements required by the human body. Give examples. (4 marks)
- b) Explain the term hypervitaminosis and the causes. (4 marks)
2. a) Explain the general functions of minerals and trace elements. (6 marks)
- b) Use examples to explain food additives reported to cause adverse reactions. (6 marks)
3. Explain the principal biological functions of zinc as a mineral. (5 marks)
4. Discuss the biological functions of vitamin A. (5 marks)

SECTION B

5. a) Discuss the macro element calcium under;
 - (i) Biological functions (6 marks)
 - (ii) Dietary sources and absorption. (4 marks)

- b) Discuss additives that amplify or promote sensory qualities. (10 marks)
- 6 a) Describe the roles played by Cholecalciferol and its dietary sources. (10 marks)
- b) Explain the biological functions and sources of Ascorbic acid. (10 marks)
- 7 a) Explain the deficiencies likely due to presence of dietary anti-vitamin factors. (4 marks)
- b) By use of examples explain the effect of processing on nutritional value of foods. (10 marks)
- (c) Explain the deficiency conditions referred as neural tube defects (NTD^s) and biological functions of nutrient concerned. (6 marks)
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