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CHUKA



UNIVERSITY

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**UNIVERSITY EXAMINATIONS**

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

**FOST 211: FOOD MICROBIOLOGY I**

**STREAMS:**

**TIME: 2 HOURS**

**DAY/DATE: WEDNESDAY 4/12/2019**

**2.30 P.M – 4.30 P.M**

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**INSTRUCTIONS**

**Answer all questions in section A and any other two in section B**

**SECTION A(30 MARKS)**

1. (a) As a food microbiologist, provide information to the public regarding raw foods of animal and marine origin. [2 marks]  
(b) Why is botulism a greater potential hazard in packaged raw fish than in packaged raw meat. [5 marks]
2. (a) Briefly describe the sequence of event that occur when bacteriophage and susceptible bacterium meet. [5 marks]
- (b) As a food microbiologist, explain to the average consumer what determines the wholesomeness of a food. [4 marks]
3. (a) You discover that your freezer containing poultry, beef, fruit and vegetables has been off for some time. What would you do with the items in the freezer? Give reasons for your actions. [4 marks]  
(b) Citing specific examples, explain the difference between food infection and food intoxication. [4 marks]
4. (a) Describe five differences between eukaryotic and prokaryotic organisms. [5 marks]  
(b) Explain various reasons why bacteria may be regarded as a true cell. [4 marks]

**SECTION B (40 MARKS)**

5. (a) With a clear illustration, discuss the growth curve of lactic acid bacteria during production of yoghurt in the laboratory. [15 marks]
- (b) With an aid of a diagram, describe the adaptive structure of an endospore. [5 marks]
6. (a) With respect to food industry, describe and explain the significance of biofilm produced by microorganisms. [8 marks]
- (b) By highlighting specific examples, discuss the importance of micro organisms in the current world. [12 marks]
7. (a) Explain intrinsic and extrinsic factors that affect mold growth in cereals and nuts. [10 marks]
- (b) Discuss the following;
- (i) Culture media
- (ii) Gram staining procedure and its implication in microbial classification. [8 marks]
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