

CHUKA



UNIVERSITY

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

FOST 346: MEAT, POULTRY AND SEA FOODS TECHNOLOGY

STREAMS: BSC FOST

TIME: 2 HOURS

DAY/DATE: MONDAY 05/07/2021

11.30 A.M. – 1.30 P.M.

INSTRUCTIONS:

- **Answer ALL question in section A and any TWO questions in section B.**

SECTION A: ANSWER ALL QUESTIONS (30 MARKS)

- Briefly explain three principal smoking techniques that are applied in meat and meat products processing. (3 marks)
 - Describe the methods used to reduce lipid oxidation during post-mortem in fish muscles. (3 marks)
- Product susceptibility to deterioration of complex food systems, such as that of canned meat products, depends on a wide variety of extrinsic and intrinsic characteristics. Explain. (6 marks)
- Briefly describe the following processes as applied in processing of meat products. (6 marks)
 - Mechanical deboning
 - Hot boning
- Describe the beneficial functional properties of nitrates in meat and meat products processing. (6 marks)
 - Briefly describe the production process of finely chopped fresh sausages. (6 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

5. (a) Consumption of meat and meat products has been on the increase especially in developing countries like Kenya. Nevertheless, protein energy malnutrition is still a problem in Kenya. Discuss how processing may be a solution in alleviating PEM in Kenya. (10 marks)
- (b) Discuss how meat becomes pale, soft, exudative (PSE) or dark, firm, dry (DFD) and explaining the strategies used to prevent these outcomes and the applications for this meat. (10 marks)
6. (a) Discuss the methods used to reduce toughening of meat due to the postmortem changes that occur in the meat muscles. (10 marks)
- (b) Discuss the formation, toxicity and prevention of nitrosamines in meat and meat products. (10 marks)
7. (a) Discuss the operations involved in the process of slaughtering cattle. (10 marks)
- (b) Discuss colour changes which occurs in cured meat before and during heat processing. (10 marks)
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