

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

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

FOST 346: MEAT, POULTRY AND SEA FOODS TECHNOLOGY

STREAMS: BSC FOST

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 08/04/2020

2.30 P.M. – 4.30 P.M.

INSTRUCTIONS:

- **Answer all questions in section A and any two questions in section B.**
- **All calculations must be shown on the booklet.**

SECTION A: ANSWER ALL QUESTIONS (30 MARKS)

1. Explain how meat becomes pale, soft, exudative (PSE) or dark, firm, dry (DFD) meat outlining some of the steps through which these changes can be prevented. (6 marks)
2. Briefly describe the three principal smoking techniques that are applied in meat and meat products processing. (6 marks)
3. Describe the four primary factors of importance in the processing of meat and meat products. (6 marks)
4. Briefly explain the methods that are used to reduce the toughening of meat due to the postmortem changes that occur. (6 marks)
5. Explain the importance of the mold cover in the processing of fermented sausages. (4 marks)
6. Describe the importance of blanching prawns before canning. (2 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

7. (a) Consumption of meat and meat products has been on the increase in especially the developing countries. Discuss how processing may be a solution to the increasing demand for meat and meat products. (10 marks)
- (b) Discuss the operations involved in the process of slaughtering poultry. (10 marks)
8. (a) Discuss the following processes as applied in meat processing outlining their advantages and disadvantages. (12 marks)
- (i) Mechanical deboning
- (ii) Hot boning
- (b) Discuss the post-mortem changes in fish muscle that are related to lipid oxidation and how lipid oxidation can be reduced. (8 marks)
9. (a) There has been safety concerns surrounding the use of nitrites and nitrates in cured meat and meat products. Do you think these concerns are valid? Discuss. (10 marks)
- (b) Product susceptibility to deterioration of complex systems, such as that of canned meat products, depends on a wide variety of extrinsic and intrinsic characteristics. Discuss. (10 marks)
-