



MERU UNIVERSITY OF SCIENCE & TECHNOLOGY

Foundation of innovations

MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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University Examination 2016/2017

THIRD YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN FOOD SCIENCE AND TECHNOLOGY AND BACHELOR OF SCIENCE IN FOOD SCIENCE AND MANAGEMENT

AFT 3354:MEAT TECHNOLOGY

DATE: JUNE 2017

TIME: 2 HOURS

INSTRUCTIONS: Answer question **one** and any other **two** questions.

QUESTION ONE (30 MARKS)

- a) Define the following terms as commonly used in meat technology. (5 Marks)
- i) Bologna
 - ii) Tenderization
 - iii) Filleting
 - iv) Curing
 - v) Mortadella
- b) Briefly explain the importance of packaging meat and meat products (5 Marks)
- i) State four ingredients that are commonly used in curing meat and their roles (4 Marks)
 - ii) Explain the key differences between 'smokie' and sausage. (2 Marks)
 - iii) Briefly explain how egg white powder is produced from shelled eggs and indicate precautions that should be put in consideration at various stages. (4 Marks)
- c)
- i) Explain the principles behind preservation of meat using cold storage technique. (3 Marks)
 - ii) State four changes that are likely to occur in meat during freezing. (2 Marks)

- iii) Explain the differences between collagen and elastin, state their possible applications. (3 Marks)
- iv) List four components that are produced by smoke which are beneficial in fish processing. (2 Marks)

QUESTION TWO (20 MARKS)

- a) Discuss various non thermal techniques that can be used in processing of meat in meat industries. (15 Marks)
- b) Briefly explain ten factors that affect meat tenderization. (5 Marks)

QUESTION THREE (20 MARKS)

- a) Explain in details the process of canning fish fillets from raw fish as received in the fish industry. (10 Marks)
- b) Explain how sausages are manufactured at MUST pilot plant. Highlight the key ingredients used. (10 Marks)

QUESTION FOUR (20 MARKS)

- a) Describe various poultry products that can be manufactured in poultry industry (8 Marks)
- b) Write short notes on the following (12Marks)
 - i) Egg products
 - ii) Egg storage conditions
 - iii) Fish spoilage