



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

P.O. Box 972 – 60200, Meru – Kenya.

Tel. 020-2069349, 061-2309217, 064-30320. Cell phone:+254 712524293, +254 789151411

Fax: 064-30321

Website: www.mucst.ac.ke Email: info@mucst.ac.ke

University Examinations 2013/2014

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 NUTRITION

AFS 2305: MEAT TECHNOLOGY

DATE: DECEMBER 2013

TIME: 2 HOURS

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

QUESTION ONE (30 MARKS)

- a) Name three sources of meat in Kenya and differentiate muscle from meat. (3 Marks)
- b) In a discussion, a student suggested that 'meat is protein'. Briefly discuss this statement. (2 Marks)
- c) Briefly discuss what you understand by the following as encountered in meat technology;
 - i. PSE meat
 - ii. DFD meat
 - iii. Rigor mortis
 - iv. Freeze burn
 - v. Meat curing
- d) A student bought fresh meat from a butcher and refrigerated it before cooking. The colour changed from the one obtained at the butcher during storage and cooking. Discuss. (6Marks)
- e) Why do you think consumers are opting for white meat compared to red meat? Could they be making a wrong decision? (3 Marks)
- f) Discuss processing and production of a chicken sausage. (6 Marks)

QUESTION TWO (20 MARKS)

- a) After graduating you are employed as a supervisor in beef processing factory. In your factory, beef is produced and supplied to supermarkets. Consumers start complaining of colour changes in your product. Discuss various colour changes they could be observing

and advice your company on ways to improve/maintain the fresh looking colour of beef.
(20Marks)

QUESTION THREE (20 MARKS)

- a) Discuss the processing of the following meat products:
 - i. Cured ham (5 Marks)
 - ii. Fermented salami (5 Marks)
 - iii. Canned beef (5 Marks)
- b) Discuss application of two novel food processing technologies in meat processing.
(5 Marks)

QUESTION FOUR (20 MARKS)

- a) White meat is considered 'healthy' However chicken meat products and fish products sold in outlets in Kenya may not be considered 'healthy'. Discuss the 'healthy' and the 'non healthy aspect'. (5 Marks)
- b) Discuss the muscle contraction pre and post-mortem. (10 Marks)
- c) Two samples of meat X and Y were frozen and thawed. The tray holding samples X collected large pools of reddish fluid compared to the tray with sample Y. Discuss the possible cause of this phenomenon, how to prevent it and its effects on meat quality. (5Marks)