



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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## University Examinations 2013/2014

THIRD YEAR, FIRST SEMESTER EXAMINATIONS FOR DEGREE OF BACHELOR OF  
SCIENCE IN FOOD TECHNOLOGY

AND

THIRD YEAR, FIRST SEMESTER EXAMINATIONS FOR DEGREE OF BACHELOR OF  
SCIENCE IN FOOD SCIENCE AND NUTRITION

### AFS 2312: FOOD PROCESSING AND PRESERVATION

DATE: APRIL 2014

TIME: 2 HOURS

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

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#### QUESTION ONE – (30 MARKS)

- (a) Explain the following terms: (3 Marks)
- (i) Irradiation
  - (ii) Food poisoning
  - (iii) Food processing and preservation
- (b) List the three types of radiations that may be used for food preservation. Explain their differences and use in the food industry. (4 Marks)
- (c) What is food spoilage? List the major causes of food spoilage. (6 Marks)
- (d) Briefly describe the principles of food preservation. (5 Marks)
- (e) List the three common types of heat treatments. (3 Marks)
- (f) Distinguish between the following:
- (i) Pasteurization and sterilization (2 Marks)
  - (ii) Refrigeration and freezing (2 Marks)
  - (iii) Dehydration and concentration (2 Marks)
- (g) Outline the importance of food processing and preservation. (3 Marks)

**QUESTION TWO – (20 MARKS)**

- (a) Discuss the three forms of food decay. (10 Marks)
- (b) Explain the factors that influence the rate of dehydration in foods. (10 Marks)

**QUESTION THREE – (20 MARKS)**

- (a) Discuss the chemical changes that take place during dehydration of foods. (10 Marks)
- (b) Explain the factors that may influence deterioration of foods in cool storage. (10 Marks)

**QUESTION FOUR – (20 MARKS)**

Discuss the preservation of foods by chemical methods. (20 Marks)