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University Examinations 2015/2016

THIRD YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN FOOD SCIENCE AND TECHNOLOGY AND BACHELOR OF SCIENCE IN FOOD SCIENCE AND NUTRITION

AFT 3331: FOOD PROCESSING AND PRESERVATION

DATE: NOVEMBER 2015

TIME: 2 HOURS

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

QUESTION ONE (30 MARKS)

- a) Outline the importance of food processing and preservation. (3 Marks)
- b) List five causes of food losses and waste. (5 Marks)
- c) Define food spoilage. List the major types of food spoilage. (4 Marks)
- d) Briefly explain what you understand by the following as applied in food processing and preservation:
 - (i) Fermentation.
 - (ii) High pressure processing. (4 Marks)
- e) Differentiate the following food preservation techniques:
 - (i) Pasteurization and sterilization. (1 Mark)
 - (ii) Refrigeration and freezing. (1 Mark)
 - (iii) Dehydration and concentration. (1 Mark)
- f) Define irradiation. Outline its uses in food processing. (5 Marks)
- g) Explain any three common unit operations in food processing. (6 Marks)

QUESTION TWO (20 MARKS)

- a) Discuss the factors that influence growth of microorganisms in foods. (15 Marks)
- b) Briefly explain five reasons why food additives are used in food processing. (5 Marks)

QUESTION THREE (20 MARKS)

- a) Describe the changes that take place on food during dehydration. (10 Marks)
- b) Briefly discuss the benefits of fermentation. (10 Marks)

QUESTION FOUR (20 MARKS)

- a) Discuss the factors that influence the rate of dehydration in foods. (10 Marks)
- b) Briefly discuss the preservation of food by use of chemicals. (10 Marks)