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**University Examinations 2014/2015**

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

**AFT 3279: FOOD CHEMISTRY II**

**DATE: APRIL 2015 TIME: 2 HOURS**

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

**QUESTION ONE (30 MARKS)**

1. List the main enzymes responsible for starch hydrolysis (2Marks)
2. Outline the strategies used to inhibit enzymatic browning (3 Marks)
3. Explain five main reasons for the use of food additives in food processing. (10 Marks)
4. List five classes of food additives (5 Marks)
5. Explain the cause of green discolouration in fresh meat (5 Marks)
6. Using examples briefly explain the meaning of a “dispersion” (5 Marks)

**QUESTION TWO (20 MARKS)**

1. Describe the manufacture of glucose syrup from starch (12 Marks)
2. Explain the use of enzymes in meat tenderization (8 Marks)

**QUESTION THREE (20 MARKS)**

1. Define nutraceuticals and describe the general mechanism of action of nutraceuticals (6 Marks)
2. Describe the changes that occur on the following compounds during processing
3. Heme
4. Chlorophyll (14 Marks)

**QUESTION FOUR (20 MARKS)**

Discuss the antimicrobial agents used in food processing to assure food safety (20 Marks)