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**University Examinations 2014/2015**

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

**AFS 2309: FRUIT AND VEGETABLE TECHNOLOGY**

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

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

**QUESTION ONE (30 MARKS)**

1. (i) Giving two examples in each case, distinguish the fat soluble pigments and water soluble

 pigments (6 Marks)

(ii) Explain the term post harvest technology (4 Marks)

1. (i) Distinguish between Jam and Marmalade (4 Marks)

(ii) Describe the modified atmosphere packaging method (6 Marks)

1. (i) Giving two examples for each, differentiate between climacteric and non-climacteric

 fruits on the basis of ethylene gas synthesis and respiration (6 Marks)

(ii) Describe the mechanism which results to plumpness and succulence of fruits and

 vegetables during ripening (4 Marks)

**QUESTION TWO (20 MARKS)**

1. Outline in details the manufacturing process of tomato sauce (14 Marks)
2. Explain how pectin substances bring about gelling during the processing of papaya jam

 (6 Marks)

**QUESTION THREE (20 MARKS)**

1. Outline the steps involved during mango concentrate processing (10 Marks)
2. Discuss the effects of heating, acid and alkali on the various colour pigments during processing of fruits and vegetables (10 Marks)

**QUESTION FOUR (20 MARKS)**

1. Using specific examples, classify fruits and vegetables on basis of their morphological features (10 Marks)
2. Discuss the various changes that occur during fruit ripening (10 Marks)