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**W1-2-60-1-6**

##  JOMO KENYATTA UNIVERSITY

**OF**

**AGRICULTURE AND TECHNOLOGY**

# University Examinations 2012/2013

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

**AFS 2306 :** **BEVERAGE TECHNOLOGY**

**DATE: AUGUST 2012 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER ALL QUESTIONS IN SECTION A AND**

 **ANY OTHER TWO QUESTIONS IN SECTION B.**

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**SECTION A: ANSWER ALL QUESTIONS**

**Q1.** (a) Explain the important characteristics of beverage foods to

human nutrition. [6 marks]

(b) Describe “soft drink beverages” and give three examples of such products. [6 marks]

**Q2.** (a) Explain the role of carbonation in soft drinks manufacture.

 [6 marks]

 (b) Outline the characteristics of natural mineral waters that

clearly distinguishes them from other drinking waters.

[6 marks]

**Q3.** Differentiate between the following types of beverage products:

1. Tonic water versus soda water. [4 marks]
2. Gin versus vodka. [4 marks]
3. Arabica coffee beans versus robusta coffee beans.

[4 marks]

**Q4.** (a) Outline the role of the following ingredients in the

manufacture of beverage products:

1. Hops. [3 marks]
2. Stabilizers. [3 marks]
3. Preservatives. [3 marks]

(b) Outline the desired properties of brewers’ yeast. [3 marks]

**Q5.** (a) Outline the plant family, the genus and main species of

cultivated teas in the world. [6 marks]

 (b) Distinguish between black tea and Oolong tea. [6 marks]

**SECTION B**

**Q6.** Discuss the procedure for black tea manufacture as practiced in Kenya. [20 marks]

**Q7.** Discuss the manufacturing process of carbonated soda soft drinks.

 [20 marks]

**Q8.** Discuss the occurrence and significance of the following chemical substances in beverage products:

1. Caffeine. [5 marks]
2. Trigonelline. [5 marks]
3. Theaflavins. [5 marks]
4. Pyrazines. [5 marks]