

**1<sup>ST</sup> SEM. 2011/12**

**UNIVERSITY**



**OF SWAZILAND**

**FINAL EXAMINATION PAPER**

**PROGRAMME : YEAR IV: BACHELOR OF SCIENCE IN  
FOOD SCIENCE, NUTRITION AND  
TECHNOLOGY**

**COURSE CODE : FSNT 409**

**TITLE OF PAPER : FOOD PROCESSING II**

**TIME ALLOWED : TWO (2) HOURS**

**INSTRUCTIONS : ANSWER QUESTION ONE (1)  
AND ANY OTHER TWO (2) QUESTIONS**

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN  
GRANTED BY THE CHIEF INVIGILATOR**

**QUESTION ONE – [COMPULSORY]**

- a. Describe five functions of food processing.  
(10 marks)
- b. Define the following terms as they refer to fruit juices: fresh squeezed juice, from concentrate, juice beverage, puree, juice cocktail.  
(10 marks)
- c. Discuss two operations that can be manipulated to increase yield from sugar cane.  
(10 marks)
- d. Discuss the functions of malting in beer production.  
(10 marks)

**[TOTAL 40 MARKS]**

**QUESTION TWO**

- a. What are the functions of the following operations in oils and fat processing?
- i. Hydrogenation
  - ii. Plasticising
  - iii. Rendering
  - iv. Expelling
  - v. Winterization
- (4 X 5 = 20 marks)
- b. Briefly discuss five factors that influence the rate of oil extraction using a solvent.  
(10 marks)

**[TOTAL 30 MARKS]**

**QUESTION THREE**

- a. Discuss the term, 'fermentation' in terms of functions, mechanism and end products, in reference to black tea, beer and coffee.  
(15 marks)
- b. Discuss the importance of water quality in relation to soft drink manufacture.  
(15 marks)

**[TOTAL 30 MARKS]**

**QUESTION FOUR**

- a. Clearly explain the main operations in refined sugar production.  
(10 marks)
- b. State five food products where cocoa is used as a significant ingredient and give its functions in each product.  
(10 marks)
- c. Discuss the importance of crystallisation in the manufacture of different confectionery products.  
(10 marks)

**[TOTAL 30 MARKS]**