



2ND SEM. 2010/2011

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

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

COURSE CODE : FSNT 409

TITLE OF PAPER : ADVANCED FOOD PROCESSING

TIME ALLOWED : TWO (2) HOURS

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

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

QUESTION 1 [Compulsory]

- a) During modification of liquid oils, there could be a possible formation of *trans* fatty acids. Based your knowledge of *trans* fats answer the following questions below:
- i. Explain the modification process that leads to the formation of *trans* fatty acids. [10 Marks]
 - ii. Discuss two advantages of the process [4 Marks]
 - iii. Describe the health impact of consuming food containing *trans* fatty acids. [5 Marks]
 - iv. List four food products that might contain *trans* fatty acids. [2 Marks]
 - v. Give an example of a company that early reformulated its line of products to eliminate *trans* fats. [3 Marks]
 - vi. Describe the labeling requirements concerning *trans* fats. [4 Marks]
 - vii. Give alternative words used on a label instead of *trans* fats. [2 Marks]
 - viii. Explain the meaning of “zero *trans* fats”, if found on a label. [4 Marks]
- b) Define the following terms:-
- i. Juice cocktail
 - ii. Nectar
 - iii. From concentrate
- [6 Marks]

[Total Marks = 40]

QUESTION 2

- a) Explain how the following properties of fats affect its melting point
- i. Degree of saturation
 - ii. Isomerism
- [10 marks]
- b) What quality characteristics do the following terms indicate: iodine value, peroxide value and acid value [12 marks]
- c) Explain beer spoilage? [8 Marks]

[Total Marks = 30]

QUESTION 3

- a) Give a flow diagram for red and white wine making from red grapes. Discuss the differences between the two wines.

[20 Marks]

- b) Justify the importance of preservation in food processing.

[10 Marks]

[Total Marks = 30]

QUESTION 4

- d) Give a general flow diagram for fruit juice manufacture. Include a brief description of how a juice concentrate is made.

[12 marks]

- a) Explain the following steps in beer manufacturing process:-

- i. Malting
- ii. Mashing

[10 Marks]

- b) Differentiate between dry and wet method of coffee processing.

[8 Marks]

[Total Marks = 30]