



2ND SEM. 2013/14

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**UNIVERSITY OF SWAZILAND
SUPPLEMENTARY EXAMINATION PAPER**

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

COURSE CODE : FSNT 411

**TITLE OF PAPER : FUNCTIONAL FOODS AND DIET
SUPPLEMENTS**

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 1 [COMPULSORY]

- (a) From a practical point of view, what could a functional food be? (15 Marks)
- (b) Identify the basis for classification of fatty acids and name the different types under each. (15 Marks)
- (c) Discuss the challenges associated with regulating functional foods. (10 Marks)

[TOTAL MARKS = 40]

QUESTION 2

- (a) In designing micro-encapsulated ingredients, what are elements the designer should have knowledge of? (10 Marks)
- (b) What are the sources of TFA? Explain. (10 Marks)
- (c) Define functional confectionary. Identify four (4) such products and explain their health benefits. (10 Marks)

[TOTAL MARKS = 30]

QUESTION 3

- (a) Define micro encapsulation and explain its purpose in functional product design. (12 Marks)
- (b) Explain the product called *Yakult*. With the aid of a flow chart, describe the steps in the process of making the product. (18 Marks)

[TOTAL MARKS = 30]

QUESTION 4

- (a) Identify **five (5)** bioactive compounds in breast milk and indicate their functional properties. (10 Marks)
- (b) Explain a symbiotic functional product and outline the steps in formulating such a product. (10 Marks)
- (c) What are the health benefits of dietary fiber? (10 Marks)

[TOTAL MARKS = 30]