



**2<sup>nd</sup> SEM. 2017/18**

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**UNIVERSITY OF SWAZILAND  
FINAL 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.**

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THE CHIEF INVIGILATOR**

**QUESTION 1 (COMPULSORY)**

- (a) Suppose you are tasked to design a functional food. Outline a guideline which you will follow in executing this task. (15 Marks)
- (b) Discuss the new approach in functional food product design (15 Marks)
- (c) Describe the health implications of Conjugated Linoleic Acid (CLA). (10 Marks)
- [TOTAL MARKS = 40]

**QUESTION 2**

- (a) Write short notes on the following: (4x5 = 20 Marks)
- i. Micro encapsulation
  - ii. Symbiotic food
  - iii. Isoflavones
  - iv.  $\beta$ -Glucan
- (b) State the aim of emulsion delivery systems in functional food product design. (10 Marks)

[TOTAL MARKS = 30]

**QUESTION 3**

- (a) Explain the physiological significance of the intestinal micro flora. (10 Marks)
- (b) Make a distinction between **authorized** claim and **qualified** claim for functional foods. (10 Marks)
- (c) Identify and describe sources of dietary fibre that possess a much broader spectrum of technological functionality than those coming from cereal brans. (10 Marks)
- (d) Describe dietary fibre and state the health benefits. (10 Marks)

[TOTAL MARKS = 30]

**QUESTION 4**

- (a) Describe encapsulation and outline considerations during the development of encapsulated functional foods (15 Marks)
- (b) State **five (5)** roles of soy products in the prevention of chronic diseases. (15 Marks)

[TOTAL MARKS = 30]