



2ND SEM. 2013/14

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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.**

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

QUESTION 1 [COMPULSORY]

- (a) A functional food will necessarily be functional for all members of the population.
Comment on this statement giving examples. (10 Marks)
- (b) Define plant sterols and explain their health benefit. (10 Marks)
- (c) Discuss the health implications of Trans fatty acids (TFA). (10 Marks)
- (d) Describe the criteria to be met by a functional ingredient in designing functional high boiling confectionery. (10 Marks)

[TOTAL MARKS = 40]

QUESTION 2

- (a) Discuss the counteracting ideas on the two starter bacteria for yogurt. (20 Marks)
- (b) Explain factors that affect the suitability for identified bioactives to be integrated into functional foods. (10 Marks)

[TOTAL MARKS = 30]

QUESTION 3

- (a) State the health benefits of insoluble fibers when used as an ingredient in functional foods. (8 Marks)
- (b) Outline the criteria to be met by a bioactive to be called prebiotics. (12 Marks)
- (c) What are primary reasons for microencapsulation of food ingredient? (10 Marks)

[TOTAL MARKS = 30]

QUESTION 4

- (a) Identify the main functional role of caseinophosphopeptides (CPPs) as functional ingredients and outline any other potential health benefit. (10 Marks)
- (b) Identify the health-promoting compounds in oats and state their respective health benefits. (10 Marks)
- (c) Briefly describe physiological significance of the intestinal flora. (10 Marks)

[TOTAL MARKS = 30]