UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

PROGRAMME : BACHELOR OF SCIENCE IN FOOD SCIENCE, NUTRITION & TECHNOLOGY;
BACHELOR OF SCIENCE IN CONSUMER SCIENCE;
BACHELOR OF SCIENCE IN CONSUMER SCIENCE EDUCATION. YEAR II

COURSE CODE : FSNT 201

TITLE OF PAPER : FOOD SCIENCE

TIME ALLOWED : TWO (2) HOURS

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

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QUESTION 1 (COMPULSORY)

(a) Describe in detail the two common types of fat/oil spoilage. Give examples of foods where these types of spoilage are common. **(10 Marks)**

(b) Enzymes play very important roles/functions in foods. Identify and explain **four (4)** of these functions or roles and give appropriate examples of foods where and why the enzymes were used in their manufacture. **(16 Marks)**

(c) The group of compounds called fats or lipids is diverse and includes a broad range of interesting substances. Identify the substances that make up this group of compounds. **(14 Marks)**

[TOTAL MARKS = 40]

QUESTION 2

Browning and pigmentation of foods are common phenomena in food applications.

i) Differentiate and explain the different types of browning reactions that typically occur in food applications. Illustrate with appropriate examples. **(12 Marks)**

ii) Name and describe two (2) types of pigments that develop in meat as a result of induced chemical or biochemical treatments. **(8 Marks)**

iii) Differentiate between the types of dietary fibre. Explain the benefits that can be derived from these group of food materials. **(10 Marks)**

[TOTAL MARKS = 30]

QUESTION 3

(a) Identify the sectors that constitute the 'Food Industry'. Describe briefly what happens in each sector. **(12 Marks)**

(b) Water plays such an important role in food applications. Explain five (5) of the roles or functions of water in Food Systems. **(10 Marks)**

(c) Explain the advantages and disadvantages of sweetening baked foods with xylitol.

(8 Marks)

[TOTAL MARKS = 30]

QUESTION 4

(a) Describe the methods and techniques for extracting oil or fat from food materials. **(9 Marks)**

(b) Describe in detail the fruit ripening process. **(5 Marks)**

(c) Differentiate between the terms saturation and unsaturation. Give examples to illustrate your answer. **(8 Marks)**

(d) Identify and explain the properties that make proteins such invaluable ingredients in food applications. **(8 Marks)**

[TOTAL MARKS = 30]