UNIVERSITY OF SWAZILAND

SUPPLEMENTARY EXAMINATION PAPER

PROGRAMME   :   BACHELOR OF SCIENCE IN FOOD SCIENCE,

NUTRITION AND TECHNOLOGY, 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 the type of ingredients, explaining their specific function, that you would use to produce a nicely raised, flavourful and even-celled brown or white bread.

(14 Marks)

(b) Identify and explain the steps (chronologically) in the making of bread until it is ready to be eaten. Be very detailed in explaining each of the steps or processes.

(14 Marks)

(c) Explain the frying process (that is what happens to the food during frying)? **(12 Marks)**

[TOTAL MARKS = 40]

QUESTION 2

(a) Identify and explain the different links or components of the 'food chain'. **(12 Marks)**

(b) Explain **three (3)** of the functions of water in food systems. **(9 Marks)**

(c) Identify the sectors that constitute the 'Food Industry'. Describe briefly what happens in each sector. **(9 Marks)**

[TOTAL MARKS = 30]

QUESTION 3

Define the following concepts and explain their importance in Food Science applications:

i) 'Retrogradation' **(5 Marks)**

ii) 'Fruit Ripening' **(5 Marks)**

iii) 'Marbling' **(5 Marks)**

iv) 'Isoelectric point' (pI) **(5 Marks)**

v) 'Modified starch' **(5 Marks)**

vi) 'Rendering' **(5 Marks)**

[TOTAL MARKS = 30]

QUESTION 4

(a) Describe the process of removing fat from an animal's fatty tissue. **(8 Marks).**

(b) Identify **three (3)** of the functions of fats and oils in food systems and give appropriate examples of food products where these functions have been adequately illustrated. **(12 Marks)**

(c) Fats and oils are generally composed of different compounds. Identify these. **(6Marks)**

(d) Why do some fruits and vegetables turn brown when cut and left sitting for some time? How can you minimize or stop the browning from occurring. **(4 Marks)**

[TOTAL MARKS = 30]