1ST SEM. 2016/2017

UNIVERSITY OF SWAZILAND

FINAL 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 : FNS 205

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) Explain in detail the value, relevance and importance of Food Science as a subject of study at tertiary level in Swaziland's economy. **(10 Marks)**

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

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

(d) 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. **(12 Marks)**

[TOTAL MARKS = 40]

QUESTION 2

(a) What key characteristics/properties of Fats are desirable in the manufacture of the following products and how does the Food Industry make that possible:

i) Chocolates and confectionary **(3 Marks)**

ii) Commercial snacks or large scale frying (the production of fast foods) **(3 Marks)**

iii) Salad dressings **(3 Marks)**

iv) High quality cakes **(3 Marks)**

(b) Describe in detail the two common types of fat/oil spoilage. Give examples of foods where these types of spoilage are common. **(8 Marks)**

(c) Browning and pigmentation of foods are common phenomena in food applications. Differentiate and explain the different types of browning reactions that typically occur in food applications. Illustrate with appropriate examples. **(10 Marks)**

[TOTAL MARKS = 30]

QUESTION 3

(a) Identify **four (4)** of the sectors that constitute the 'Food Industry'. Describe briefly what happens in each sector.

(12 Marks)

(b) Differentiate between the types of dietary fibre. Explain the benefits that can be derived from this group of food materials.

(8 Marks)

(c) 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.

(10 Marks)

[TOTAL MARKS = 30]

QUESTION 4

(a) There are several colour pigments and flavour compounds that naturally occur in plant foods like crops, vegetables and fruits.

(i) Identify and describe **three (3)** broad classes of these colour pigments, and give examples of foods that are good sources of each class.

(9 Marks)

(ii) Name **three (3)** types or classes of vegetables or crops that contain distinct flavour compounds. For each class name the compound (s) contained in these vegetables or crops.

(9 Marks)

(b) What ingredients, processes and conditions are required for a good quality loaf of regular bread? How does each of these ingredients function to produce a desirable loaf of bread?

(12 Marks)

[TOTAL MARKS = 30]

2nd SEM. 2016/17

UNIVERSITY OF SWAZILAND
DEPARTMENT OF FOOD AND NUTRITION SCIENCES
FINAL EXAMINATION PAPER

PROGRAMME	:	**BACHELOR OF SCIENCE IN FOOD SCIENCE, NUTRITION AND TECHNOLOGY AND CONSUMER SCIENCE YEAR II**
COURSE CODE	:	**FNS 206**
TITLE OF PAPER	:	**COMMUNITY NUTRITION**
TIME ALLOWED	:	**TWO (2) HOURS**
INSTRUCTIONS	:	**ANSWER QUESTION ONE (1) AND ANY OTHER TWO (2) QUESTIONS**

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QUESTION I COMPULSORY

(a) Community nutritionists can plan an effective nutrition education program using one or a combination of models. The foundations of a successful community nutrition program are set at the conceptualization and planning phase.
Review the steps and types of decisions that need to be made when developing a community nutrition program.

(17 marks)

(b) Describe the ABCDs of nutritional assessment.

(23 marks)

[TOTAL MARKS = 40]

QUESTION 2

(a) List two biochemical tests that you could use to measure protein and iron status, and discuss the consequences of inadequate intake of these nutrients.

(16 marks)

(b) Discuss the advantages and disadvantages of the use of 24 hour recall and food frequency questionnaires.

(14 marks)

[TOTAL MARKS = 30]

QUESTION 3

(a) What are the causes of hunger and malnutrition worldwide?

(15 marks)

(b) What role can community nutritionists play in the prevention of hunger and malnutrition?

(15 marks)

[TOTAL MARKS = 30]

QUESTION 4

(a) Describe specific objectives of a Nutritional surveillance system.

(10 marks)

(b) Discuss the importance of a Nutritional Care Plan.

(10 marks)

(c) The diet transition in the developing world seems to be accelerating. What can food policy do to redirect the diet transition toward healthier outcomes.

(10 Marks)

[TOTAL MARKS = 30]