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OF SCIENCE AND TECHNOLOGY

**Faculty of Health, Natural
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QUALIFICATION : BACHELOR OF HUMAN NUTRITION	
QUALIFICATION CODE: 08BOHN	LEVEL: 5
COURSE: INTRODUCTION TO FOODS, NUTRITION AND HEALTH	COURSE CODE: IFN521S
DATE: JANUARY 2025	SESSION: 1
DURATION: 3 HOURS	MARKS: 100

SECOND OPPORTUNITY/SUPPLEMENTARY EXAMINATION: QUESTION PAPER

EXAMINER: MS MARJORIE VAN WYK

MODERATOR: DR. LARAI AKU AKAI

INSTRUCTIONS:

1. Answer all questions on the separate answer sheet.
2. Please write neatly and legibly.
3. Do not use the left side margin of the exam paper. This must be allowed for the examiner.
4. No books, notes and other additional aids are allowed.
5. Mark all answers clearly with their respective question numbers.

PERMISSIBLE MATERIALS:

1. Non-Programmable Calculator

This paper consists of 4 pages including this front page

SECTION A: MULTIPLE CHOICE, TRUE / FALSE AND MATCHING**[15 MARKS]****QUESTION 1: MULTIPLE CHOICE QUESTIONS****[5 MARKS]**

Evaluate the statements in each numbered section and select the most appropriate answer or phrase from the given possibilities. Fill in the appropriate letter next to the number of the correct statement/phrase on your ANSWER SHEET.

[5]

- 1.1 A client asks how she can speed up her metabolism. The best response is: **[1]**
A. "You can't. Metabolic rate is genetically determined."
B. "Ask your doctor to check your thyroid hormone levels. Taking thyroid hormone will stimulate metabolism."
C. "Eat fewer calories because that will stimulate metabolic rate".
D. "Include resistance training in your exercise program because adding muscle tissue will increase metabolic rate"
- 1.2 When breastfeeding is replaced by less nutritive food low in proteins and calories, the infants below the age of one year are likely to suffer from: **[1]**
A. Kwashiorkor
B. Marasmus
C. Rickets
D. Pellagra
- 1.3 How many kcal are there in one gram of ethanol: **[1]**
A. 23.5 kJ or 5.8 kcal per g
B. 19.7 kJ or 4.1 kcal per g
C. 29.7 kJ or 7.1 kcal per g
D. 36.5 kJ or 8.1 kcal per g
- 1.4 What is the best way to protect yourself against HIV: **[1]**
A. Get yourself vaccinated for HIV
B. Use a latex condom during sexual intercourse
C. Use birth control pills
D. B and C
- 1.5 Compare the following statements and identify a **structure-function** claim: **[1]**
A. Build stronger bones.
B. Source of Calcium.
C. Reduced fat.
D. None of the above.

QUESTION 2: TRUE/FALSE QUESTIONS**[5 MARKS]**

Evaluate the statements and select whether the statement is true or false. Write the word 'True' or 'False' next to the corresponding number on your ANSWER SHEET (1 mark each).

[5]

- 2.1 Hypokalaemia is caused by an abnormal heartbeat.
- 2.2 The vitamin that is necessary for the proper clotting of the blood is vitamin K.
- 2.3 Carbohydrates are fattening.

- 2.4 Blindness can result from a severe lack of vitamin A.
- 2.5 Dietary cholesterol is not required because our body makes all the cholesterol it needs.

QUESTION 3: MATCHING QUESTIONS

[5 MARKS]

Evaluate the statements. On the line to the left of each nutrient in Column I, write the letter of the major food sources presented in Column II. Use each food source only once. Fill in the appropriate letter next to the number of the correct statement/phrase on your ANSWER SHEET (1 mark each).

[5]

Column I	Column II
3.1 Thiamin	A. Fortified milk, margarine, butter
3.2 Vitamin A	B. All whole foods, meats, milks, fruits,
3.3 Iron	C. Spinach, dark green leafy vegetables
3.4 Potassium	D. Whole-grain, fortified or enriched food
3.5 Vitamin D	E. Red meats, fish, poultry

SECTION B: SHORT ANSWER QUESTIONS

[20 MARKS]

Please answer ALL of the questions in this section.

QUESTION 4:

[10 MARKS]

4. Define the following terms:
- 4.1 Nutritional status [2]
- 4.2 Nutrigenomics [2]
- 4.3 Normal nutrition [2]
- 4.4 Nutritional assessment [2]
- 4.5 Functional foods [2]

QUESTION 5:

[10 MARKS]

- 5.1 Identify the factors that enhance calcium absorption: [2]
- 5.2 Describe the characteristics of a person suffering from binge-eating disorder: [3]
- 5.3 Identify the end products of fat digestion: [3]
- 5.4 Discuss any two (2) effects of high sugar intake on health: [2]

SECTION C: LONG ANSWER QUESTIONS

[30 MARKS]

Please answer ALL of the questions in this section.

QUESTION 6:

[30 MARKS]

- 6.1 Differentiate between peristalsis and segmentation. [4]
- 6.2 Explain the duties of the Nutritionist. [10]
- 6.3 Describe under which circumstances vitamin and mineral supplements may be beneficial for some individuals. [5]

- 6.4 Demonstrate the biological determinants that may influence food intake. [6]
- 6.5 There are six (6) principles that can guide a nutritionist when planning a diet. Analyse any five (5) principles. [5]

SECTION D: CASE STUDY QUESTIONS

[35 MARKS]

Please answer ALL of the questions in this section.

QUESTION 7:

[35]

CASE STUDY

Kylian is a 24 year old man who visited the clinic as his regular follow up visit. He is 170 cm tall and weighs 44 kg. During his previous visit at the clinic, he weighed 54 kg. Kylian is moderately active, with an activity factor of 0.4. His usual diet provides an average intake of 305 g of carbohydrates, 102 g of protein and 45 g of fat.

- 7.1 Calculate Kylian's Body Mass Index (BMI). [4]
- 7.2 Interpret Kylian's BMI. [2]
- 7.3 Calculate the percentage weight loss of Kylian. [3]
- 7.4 Comment on the percentage weight loss of Kylian. [2]
- 7.5 Calculate how many kcalories, Kylian consumes. [6]
- 7.6 Determine the percentage energy contribution of each of the macronutrients to Kylian's the total energy intake. [6]
- 7.7 Compare Kylian's diet with the Acceptable Macronutrient Distribution Ranges (AMDR) for a healthful diet. [6]
- 7.8 Calculate the energy requirements of Kylian. [6]

END OF QUESTION PAPER