

UNIVERSITY OF KWAZULU-NATAL
SCHOOL OF AGRICULTURAL SCIENCES & AGRIBUSINESS
DISCIPLINE OF DIETETICS & HUMAN NUTRITION
EXAMINATION: JUNE 2011
SUBJECT, COURSE & CODE: NUTRITION 114, INTRODUCTORY NUTRITION &
COMMUNITY RESOURCES, P1

DURATION: 3 HOURS

MARKS: 150

External Examiner: Mrs S Kassier
Internal Examiner: Mr R Gordon

This exam paper consists of two sections: Section A (2 pages and 100 marks) and Section B (10 pages and 50 marks). Please check that you have all the pages and please answer both sections.

Section A must be answered in the exam answer booklet.

Section B consists of multiple choice questions, calculations and short questions and must be answered on the paper provided.

SECTION A

100 MARKS

Please answer all of the questions below.

QUESTION 1

- 1.1 Nutrition can be seen to have an effect on health in 4 main areas. Discuss this statement fully. [20]

TOTAL MARKS = 20

QUESTION 2

- 2.1 You have been asked to give advice to a group of students on how to spend less money when buying protein-rich foods. What would you advise the students? [8]
- 2.2 Discuss “traffic routing” in the supermarket as a marketing strategy to increase sales. [12]

TOTAL MARKS = 20

QUESTION 3

- 3.1 List the agricultural related factors which contribute to household food insecurity. [5]
- 3.2 Although nutrition education is an important strategy in combating malnutrition, it often fails. Elaborate on this statement. [6]

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- 3.3 What is care and what are the caring practices that should be maintained to ensure optimal care of children? [9]

TOTAL MARKS = 20

QUESTION 4

- 4.1 Discuss the six (6) basic diet planning principles. [15]
- 4.2 List five (5) characteristics of successful dietary guidelines. [1 X 5 = 5]

TOTAL MARKS = 20

QUESTION 5

- 5.1 Explain how the type of work a person does can influence their eating habits. [20]

TOTAL MARKS = 20

END OF SECTION A

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NOTE: THIS PAPER CONSISTS OF TEN (10) PAGES. PLEASE SEE THAT YOU HAVE THEM ALL.

STUDENT NUMBER: _____

SECTION B: MULTIPLE CHOICE, CALCULATIONS AND SHORT QUESTIONS

50 MARKS

QUESTION ONE

[1 X 20 = 20 MARKS]

MULTIPLE CHOICE QUESTIONS

Please indicate your answer by clearly placing a circle around the letter that corresponds to your answer.

NEGATIVE MARKING APPLIES

1 mark for each correct answer

Minus ½ mark for each incorrect answer

0 marks for no answer

INTRODUCTION TO NUTRITION AND OVERVIEW OF NUTRIENTS (1X4)

1. In which year was the term “vitamin” coined?
 - A. 1912
 - B. 1913
 - C. 1915
 - D. 1920

2. Which of the following is not a trace mineral?
 - A. Iodide
 - B. Magnesium
 - C. Manganese
 - D. Fluoride

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3. Which statement on the Adequate Intake (AI) is true?
- A. The AI is used as a goal for intakes of groups or populations
 - B. If an individual has an intake below the AI they are likely to be deficient in that nutrient
 - C. The AI is used together with the Estimated Average Intake (EAR) when there is insufficient evidence to calculate the Recommended Dietary Allowance (RDA)
 - D. The value for the AI is generally smaller than the EAR and RDA values
4. The energy found in food is called _____ energy
- A. Heat
 - B. Mechanical
 - C. Chemical
 - D. Electrical

PROCURING AND USING FOOD (1 X 4)

5. Which is the best way to thaw/defrost meat items?
- A. At room temperature
 - B. In warm water
 - C. In a microwave oven
 - D. In a refrigerator
6. Households in Living Standards Measure (LSM) 6 spent most of their food budget on?
- A. Meat and poultry
 - B. White bread
 - C. Rice
 - D. Fresh milk

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7. In order for a store to be classified as a combination store, what % of the floor space must be devoted to non-food items?
- A. 10%
 - B. 20%
 - C. 30%
 - D. 40%
8. Which of the following statements would not be prohibited on a food label?
- A. "Serving suggestion"
 - B. "Recommended by Doctors"
 - C. "Health giving properties"
 - D. "Helps to lose weight"

PUBLIC HEALTH NUTRITION (1 X 4)

9. Which of the following is not a factor related to characteristics of society that contributes to household food insecurity?
- A. War and violence
 - B. Lack of maternal and child care
 - C. Lack of food availability-inadequate distribution and marketing systems
 - D. Food customs and taboos
10. According to the National Food Consumption Survey (NFCS) of 2005, ___ women had a poor iron status.
- A. 1 in 5
 - B. 1 in 4
 - C. 1 in 3
 - D. 1 in 2

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11. Since 1994 South Africa has achieved numerous milestones in the area of health and nutrition. Which of the following is not one of these milestones?
- A. Mandatory iodisation of all table salt
 - B. Vitamin A supplementation
 - C. Standardisation of the Road to Health Chart
 - D. Development of food-based dietary guidelines for South Africans 7 years and younger
12. Which of the following statements on the Road to Health Charts is false?
- A. There are separate charts for boys and girls
 - B. The vertical axis represents weight in kilograms
 - C. Old charts used Z score lines
 - D. Line labelled 0 is the median (average)

PLANNING A HEALTHY DIET (1 X 4)

13. What is the WHO/FAO recommendation for daily intake of total dietary fibre?
- A. 25-35 g/day
 - B. 25-30 g/day
 - C. 27- 40 g/day
 - D. 27- 45 g/day
14. Which of the following is not designed to be used by consumers or the general public?
- A. Food Composition Tables and Food Quantities Manuals
 - B. The Food Guide Pyramid
 - C. Mixed Meal Guide
 - D. Food Groups

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15. In the MyPyramid nutrition education tool, the colours of the pyramid illustrate:
- A. Activity
 - B. Proportionality
 - C. Variety
 - D. Personalisation
16. Which of the following is not a benefit of adding fats and oils to a staple as part of a mixed meal?
- A. Fats and oils provide additional energy and improve the taste of the meal
 - B. Fats and oils improve the protein quality of the meal
 - C. Fats and oils reduce the bulk of the meal
 - D. Fats and oils provide essential fatty acids and fat soluble vitamins

FACTORS INFLUENCING EATING BEHAVIOUR (1 X 4)

17. In which form of Christianity is a lacto-ovo vegetarian diet recommended?
- A. Roman Catholics
 - B. Mormons (Latter Day Saints)
 - C. Seventh Day Adventists
 - D. Eastern Orthodox Christians
18. According to Judaism which of the following are regarded as being unclean?
- A. Goat
 - B. Shellfish
 - C. Sheep
 - D. Cow
19. In which religion is the mixing of milk and meat products prohibited?
- A. Hinduism
 - B. Judaism
 - C. Islam
 - D. Roman Catholics

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20. Which religious group prepares a dish called Magerista?
- A. Hindus
 - B. Roman Catholics
 - C. Seventh Day Adventists
 - D. Eastern Orthodox Christians

END OF MULTIPLE CHOICE QUESTIONS

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QUESTION TWO

10 MARKS

CALCULATIONS *(please show all working in the spaces provided)*

- 2.1 A portion of macaroni cheese contains the following macronutrients, given as percentage contribution to total energy:

Energy = 1074 kJ
Carbohydrate = 38%
Fat = 33%
Protein = 29%

Calculate the amounts of each macronutrient found in the macaroni cheese. [3]

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2.2 A 100g portion of pizza made with cheese, tomato and olives contains the following macronutrients:

25 g carbohydrate

9 g protein

12 g fat

2.2.1 Calculate the energy content of the portion of pizza in kilocalories. [4]

2.2.2 Calculate the percentage contribution of each macronutrient to total energy. [3]

END OF QUESTION TWO: CALCULATIONS

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QUESTION THREE

20 MARKS

SHORT QUESTIONS

- 3.1 List the steps (in the correct sequence) that must be followed with the scientific method of carrying out nutrition experiments. [$\frac{1}{2} \times 5 = 2\frac{1}{2}$]

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- 3.2 List in full the 4 nutrient based reference values that make up the Dietary Reference Intakes (DRIs). [$\frac{1}{2} \times 4 = 2$]

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- 3.3 List three (3) sources of *Escherichia coli*. [$1 \times 3 = 3$]

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3.4 List four (4) groups of people that are especially susceptible to food borne illnesses? [½ X 4 = 2]

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3.5 List three (3) short term strategies to combat malnutrition. [½ X 3 = 1½]

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3.6 “Since 1994, South Africa has achieved numerous milestones in its efforts to eliminate malnutrition”
List any three (3) of these achievements. [1 X 3 = 3]

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3.7 List the six (6) basic diet planning principles. [½ X 6 = 3]

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3.8 List three (3) functions of food in religion. [1 X 3 = 3]

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END OF SHORT QUESTIONS AND END OF SECTION B