

**UNIVERSITY OF KWAZULU-NATAL**  
**SCHOOL OF AGRICULTURAL, EARTH & ENVIRONMENTAL SCIENCES**  
**DISCIPLINE OF DIETETICS AND HUMAN NUTRITION**  
**EXAMINATION: JUNE 2013**  
**SUBJECT, COURSE & CODE: NUTR 114 – INTRODUCTORY NUTRITION &**  
**COMMUNITY RESOURCES**

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**DURATION: 3 HOURS**

**TOTAL MARKS: 150**

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**External Examiner: Mrs S Kassier**  
**Internal Examiner: Dr K Pillay**

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**This exam paper consists of two sections: Section A (2 pages and 100 marks) and Section B (11 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.**

**PLEASE WRITE LEGIBLY AND ANSWER ALL QUESTIONS IN INK.  
ANSWERS WRITTEN IN PENCIL WILL NOT BE MARKED.**

**SECTION A**

**100 MARKS**

**Please answer all of the questions below.**

**QUESTION ONE**

1.1 Explain how psychosocial factors can influence health. [20]

**TOTAL MARKS = 20**

**QUESTION TWO**

2.1 Explain how the food bill can be reduced when buying fruit and vegetables. [5]

2.2 Discuss “traffic routing” in the supermarket as a marketing strategy to increase sales. [12]

2.3 Which three (3) factors make a food item hospitable to micro organism growth? [1X3=3]

**TOTAL MARKS = 20**

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**QUESTION THREE**

- 3.1 What is care and what are the caring practices that should be maintained to ensure optimal care of children? [10]
- 3.2 List the six (6) long term strategies to combating malnutrition. [1 X 6 = 6]
- 3.3 What is the purpose of the “Code of Marketing of Breastmilk Substitutes”? [2]
- 3.4 What do “O” and “I” stand for in the GOBI-FFFF acronym. [2]

**TOTAL MARKS = 20**

**QUESTION FOUR**

- 4.1 Discuss the six (6) basic diet planning principles. [15]
- 4.2 What are the aims of the South African Food Guide? [4]
- 4.3 List the South Africa Prudent Diet Guideline for dietary fibre. [1]

**TOTAL MARKS = 20**

**QUESTION FIVE**

- 5.1 Discuss the role of family as a social factor in influencing eating behaviour.

**TOTAL MARKS = 20**

**END OF SECTION A**

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**NOTE: THIS PAPER CONSISTS OF ELEVEN (11) PAGES. PLEASE SEE THAT YOU HAVE THEM ALL.**

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**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. The energy found in food is called \_\_\_\_\_ energy
  - A. Chemical
  - B. Mechanical
  - C. Heat
  - D. Electrical
  
2. The WHO definition of health encompasses the following 3 aspects for well being:
  - A. psychological, social and mental
  - B. social, mental and physical
  - C. social, physiological and mental
  - D. physical, nutritional and mental

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3. Which one of the following is not a trace/micro mineral?
- A. Iron
  - B. Chloride
  - C. Copper
  - D. Fluoride
4. Which one of the following statements about minerals is true?
- A. Minerals are energy-yielding nutrients
  - B. Minerals are required in amounts of grams/day
  - C. Minerals are inorganic
  - D. Minerals are easily destroyed during storage, processing and cooking of food

***PROCURING AND USING FOOD (1 X 4)***

5. Which of the following statements on intoxication is true?
- A. Toxins are produced by viruses found in food
  - B. Toxins cause symptoms ranging from mild stomach pain to paralysis and death
  - C. Enterotoxins act upon the cells of the nervous system
  - D. Neurotoxins act upon the mucous membranes in the body
6. The use of colour-coded chopping boards in the kitchen is an application of which one of the WHO 5 Keys to safer Food?
- A. Avoid cross-contamination
  - B. Keep clean
  - C. Cook food thoroughly
  - D. Keep food at safe temperatures

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7. Which of the following statements on Codex Alimentarius is incorrect?
- A. Developed by an International Commission established in 1964
  - B. Latin term meaning “Food Code”
  - C. South Africa is one of 165 member states and is expected to implement Codex Alimentarius standards in the national food legislation
  - D. South Africa is represented at Codex by the Directorate for Food Control (Department of Health)
8. According to 2005 Household Expenditure, on which food item was the most amount of money spent amongst the LSM group 1?
- A. White bread
  - B. Meat
  - C. Poultry
  - D. Rice

***PUBLIC HEALTH NUTRITION (1 X 4)***

9. According to the conceptual framework on the causes of malnutrition, which of the following is not an underlying cause of malnutrition?
- A. Insufficient household food security
  - B. Inadequate maternal and child care
  - C. Inadequate dietary intake
  - D. Insufficient health services and unhealthy environment
10. According to the South African Vitamin A Consultative Group Study (SAVACG) of 1994 \_\_\_\_\_ children had marginal vitamin A status.
- A. 1 in 2
  - B. 1 in 3
  - C. 1 in 4
  - D. 1 in 5

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11. According to the Code of Marketing of Breast Milk Substitutes which of the following is not prohibited?
- A. Giving free samples to mothers
  - B. Contact between representatives and mothers
  - C. Pictures of infants or words idealising the product
  - D. Informing on the costs and hazards of artificial feeding
12. Which of the following is not a long term strategy to combat malnutrition?
- A. Fortification
  - B. Nutrition education
  - C. Primary Health Care Services
  - D. Dietary diversification

***PLANNING A HEALTHY DIET (1 X 4)***

13. According to the Food and Agriculture Organization (FAO) and World Health Organization (WHO) the recommendation for total fat is\_\_\_\_\_.
- A. 15-20% of total energy
  - B. 15-25% of total energy
  - C. 15-30% of total energy
  - D. 15-35% of total energy
14. Which of the following statements on dietary guidelines is false?
- A. Dietary guidelines are designed to be used by consumers
  - B. Dietary guidelines are quantitative messages
  - C. Dietary guidelines make use of food-based messages
  - D. Dietary guidelines are less technical compared to dietary goals

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15. In the My Pyramid nutrition education tool, the narrow slivers of colour at the top of the pyramid indicate:
- A. Gradual improvement
  - B. Moderation
  - C. Proportionality
  - D. Personalisation
16. Which of the following is the correct South African Prudent Dietary Guideline for dietary fibre?
- A. 25-30 g/day
  - B. 27-40 g/day
  - C. 25-35 g/day
  - D. 25-40 g/day

***FACTORS INFLUENCING EATING BEHAVIOUR (1 X 4)***

17. Which religious group prepares the dish, Kolivia, on the death of a loved one?
- A. Eastern Orthodox Christians
  - B. Roman Catholics
  - C. Mormons (Latter Day Saints)
  - D. Seventh Day Adventists
18. 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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19. In which religion is aqiqah celebrated with the birth of a baby?

- A. Islam
- B. Judaism
- C. Hinduism
- D. Christianity

20. In which religion is food classified as being “hot” or “cold”?

- A. Islam
- B. Judaism
- C. Hinduism
- D. Christianity

**END OF QUESTION ONE: MULTIPLE CHOICE QUESTIONS**



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**QUESTION TWO**

**CALCULATIONS**

**10 MARKS**

2.1 A 140 g portion of cottage pie contains the following macronutrients:

8 g carbohydrate

20 g protein

14 g fat

2.1.1 Calculate the energy content of the portion of cottage pie in kilocalories. [4]

2.1.2 What is the percentage contribution of each macronutrient to total energy in this dish? [3]

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2.2 A slice of cheese cake contains the following macronutrients, given as percentage contribution to total energy:

Energy = 895 kJ

Carbohydrate = 42%

Fat = 41%

Protein = 17%

2.2.1 Calculate the grams of each macronutrient found in the cheese cake. [3]

**END OF QUESTION TWO: CALCULATIONS**

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**QUESTION THREE**

**SHORT QUESTIONS**

**20 MARKS**

3.1 In which year was the first amino acid discovered? [1]

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3.2 Which nutrient makes up the greatest percentage of the human body? [1]

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3.3 List in full the four (4) nutrient based reference values that make up the Dietary Reference Intakes (DRIs) (do not give abbreviations) [½ X 4 = 2]

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3.4 According to the South African food labelling regulations what information must appear on a box of infant cereal designed to be used as a weaning food in infants 6 months of age? [6 X ½ = 3]

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3.5 What is the difference between the “best before” date and the “use by” date? [4]

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

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3.8 Give the South African Prudent Dietary Guideline for salt. [1]

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3.9 List six (6) factors that have influenced traditional eating habits. [6 X ½ = 3]

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**END OF QUESTION THREE: SHORT QUESTIONS**