

**UNIVERSITY OF KWAZULU-NATAL  
SCHOOL OF AGRICULTURAL, EARTH & ENVIRONMENTAL SCIENCES  
DISCIPLINE OF DIETETICS AND HUMAN NUTRITION  
EXAMINATION: JUNE 2014**

**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 A Van Onselen  
Internal Examiner: Dr K Pillay**

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**This exam paper consists of two sections: Section A (3 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 in the booklet provided.**

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

**SECTION A**

**100 MARKS**

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Please answer all of the questions below.

**QUESTION ONE**

“The Recommended Dietary Allowances (RDA) were first published in 1943 and have now been replaced by the Dietary Reference Intakes (DRIs)”.

- 1.1 Explain why the DRIs have replaced the original RDAs. [5]
- 1.2 Explain what the DRIs are and give a detailed explanation of each of the nutrient based reference values that make up the DRIs. [15]

**TOTAL MARKS = 20**

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**QUESTION TWO**

- 2.1 Keeping cold food cold is a key factor in the prevention of food-borne illness. Explain how this can be achieved. [5]
- 2.2 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]
- 2.3 Which groups of people are especially at risk for food borne illnesses? [ $\frac{1}{2} \times 8 = 4$ ]
- 2.4 Explain the South African Food Labelling Laws with regards to pictorial representations. [3]

**TOTAL MARKS = 20**

**QUESTION THREE**

- 3.1 Explain how factors related to the **characteristics of the household** can contribute to household food insecurity. [15]
- 3.2 Why was the Code of Marketing of Breast Milk Substitutes developed and what does the code apply to? [5]

**TOTAL MARKS = 20**

**QUESTION FOUR**

- 4.1 Discuss the characteristics of successful dietary guidelines. [6]
- 4.2 Discuss the limitations of using the Food Composition Tables. [12]
- 4.3 Explain how the Food Quantities Manuals are used. [2]

**TOTAL MARKS = 20**

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**QUESTION FIVE**

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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**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 “vitamine” coined?
  - A. 1913
  - B. 1915
  - C. 1912
  - D. 1920
  
2. Which of the following is not an example of over nutrition?
  - A. Obesity
  - B. Stunting
  - C. Overweight
  - D. Vitamin A toxicity
  
3. Which one of the following is required in amounts of >100 mg/day?
  - A. Sulfur
  - B. Selenium
  - C. Copper
  - D. Iron

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4. Identify the correct statement on minerals:
- A. Minerals are energy-yielding nutrients
  - B. Minerals are required in amounts of grams/day
  - C. Minerals are organic
  - D. Minerals are not easily destroyed during storage, processing and cooking of food

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

5. According to research on 2005 Household Expenditure, LSM group 6 spent \_\_\_\_ of their budget on food.
- A. 71%
  - B. 11%
  - C. 24%
  - D. 8%
6. 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”
7. Which statement on food purchasing is false?
- A. Processing increases the cost of a food
  - B. A speciality store usually charges higher prices than a supermarket
  - C. 80% of domestic purchases occur on a Thursday, Friday and Saturday
  - D. Home brands are always cheaper

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8. Which of the following bacteria produce heat-resistant spores?

- A. *Staphylococcus aureus*
- B. *Clostridium perfringens*
- C. *Clostridium botulinum*
- D. *Salmonella*

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

9. Which of the following is a short term strategy to cope with malnutrition?

- A. Fortification
- B. Nutrition Education
- C. Health facilities based food programme
- D. Primary Health Care Services

10. Which of the following is not a common belief on breastfeeding?

- A. Throw colostrum away and give sugar water instead
- B. Breast milk has high satiety value for babies
- C. Not to breastfeed if previous child has died
- D. Breast milk is too thin

11. According to the National Food Consumption Survey (NFCS) of 1999 \_\_\_\_\_ households were at risk for hunger

- A. 1 in 5
- B. 2 in 4
- C. 1 in 4
- D. 2 in 5

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12. According to the South African Vitamin A Consultative Group Study (SAVACG) of 1994 \_\_\_\_\_ children had iron deficiency anaemia.
- A. 1 in 5
  - B. 1 in 3
  - C. 1 in 4
  - D. 1 in 2

***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 dietary fibre is \_\_\_\_\_.
- 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 the best example of a meal that encompasses the 5 food groups?
- A. Yoghurt; Rice; Margarine; Apple; Butter
  - B. Milk; Fish; Carrots; Rice; Margarine
  - C. Butternut; Pasta; Cooking oil; Orange; Rice
  - D. Dried beans; Banana; Samp; Pear; Carrots
15. In the MyPyramid nutrition education tool which of the following indicates gradual improvement?
- A. A person climbing steps
  - B. The slogan “MyPyramid”
  - C. Narrow slivers of colour at the top of pyramid
  - D. The slogan “Steps to a healthier you”

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16. Which of the following nutrient composition data is not found in the Food Composition Tables?
- A. Moisture
  - B. Amino acids
  - C. Ash
  - D. Energy

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

17. *Navarathri* is observed in \_\_\_\_:
- A. Islam
  - B. Judaism
  - C. Hinduism
  - E. Christianity
18. According to Judaism which of the following are regarded as being unclean?
- A. Goat
  - B. Shellfish
  - C. Sheep
  - D. Cow
19. 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



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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 QUESTION ONE: MULTIPLE CHOICE QUESTIONS**

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**QUESTION TWO**

**CALCULATIONS**

**10 MARKS**

2.1 A jam doughnut weighs 55 g and contains the following macronutrients:

27 g carbohydrate

3 g protein

8 g fat

2.1.1 Calculate the energy content of the jam doughnut in kilocalories. [4]

2.1.2 Calculate the percentage contribution of each macronutrient to total energy in the jam doughnut.

[3]

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2.2 A 150 g portion of macaroni and 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 portion of macaroni and cheese.[3]

**END OF QUESTION TWO: CALCULATIONS**

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**QUESTION THREE**

**SHORT QUESTIONS**

**20 MARKS**

3.1 In which year was vitamin A isolated? [1]

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3.2 What is the alternative name for vitamin B2? [1]

.....

3.3 Explain the difference between **infection** and **intoxication**. [2]

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3.4 What is the temperature danger zone? [1]

.....

3.5 List the WHO five (5) keys to safer food. [ $\frac{1}{2} \times 5 = 2\frac{1}{2}$ ]

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3.6 What does **SANHANES** stand for? [2]

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3.7 According to the National Food Consumption Survey Fortification Baseline (2005) how many children were stunted? [1]

.....

3.8 Which three (3) growth charts are found in the Road to Health Booklets? [ $\frac{1}{2} \times 3 = 1\frac{1}{2}$ ]

.....  
.....  
.....

3.9 List the South African Prudent Dietary Guideline for:

3.9.1 Fat [2]

.....  
.....

3.9.2 Carbohydrates [2]

.....  
.....

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3.10 There are four (4) age groups proposed in the South African Paediatric Food based Dietary Guidelines. List the four (4) age groups. [ $\frac{1}{2} \times 4 = 2$ ]

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3.11 In which religion is *Yom Kippur* observed? [1]

.....

3.12 Name the dish that is prepared by Eastern Orthodox Christians on the death of a loved one? [1]

.....

**END OF QUESTION THREE: SHORT QUESTIONS**