FACULTY	Health Sciences and Veterinary Medicine		
SCHOOL	Allied Health Sciences		
DEPARTMENT	Physical and Sport Sciences		
MODULE	**FOUNDATIONS OF HUMAN NUTRITION**		
MODULE CODE	AC3512E		
DATE	November 2024		
DURATION	**3 hours**	**MARKS**	**100**

2nd OPPORTUNITY EXAMINATION

Examiner: Ms. M. C. Keyter
Moderator: Ms. H. Ushoona

This question paper consists of six **(6)** pages, excluding the cover page.

Instructions to candidate

1. Work in an orderly way and present your work as neatly as possible.
2. While most of the marks will be awarded for content, candidates must consider the importance of presentation, i.e. insight and critical thinking.
3. Number your questions correctly and clearly.
4. The use of a calculator is permitted
5. **ONE** Appendix with the necessary formulas is provided
6. **ANSWER ALL QUESTIONS IN SECTION A**
7. **ANSWER ALL QUESTIONS IN SECTION B**
8. **ANSWER ONE QUESTION IN SECTION C**

UNIVERSITY OF NAMIBIA EXAMINATIONS

SECTION A: ANSWER ALL QUESTIONS

QUESTION 1

Define the following concepts:

1.1. Household food security;

1.2. Resistance starch; and

1.3. Extrinxic sugar. [9]

SECTION B: ANSWER ALL QUESTIONS

QUESTION 2

Hoze is 26 years of age, 1,75 m tall and weighs 107 kg. He is a very active person who does weight training three times a week and he also jogs five times a week. He is very health conscience and drinks 2 litres of water and other healthy fluids a day.

Anna is 28 years of age, 1,6 m tall and weighs 45 kg. For the past three years she has been suffering from hiperthyriodism. She works as a secretary.

2.1. Provided the information above, calculate the following;

a. The BMI of Hoze. (2)

b. The energy needs of both Hoze and Anna. (6)

c. The water needs of Hoze. (2)

d. The protein needs of Anna. (2)

e. Calculate Hoze's WHR if his waist is 81cm and hips is 75 cm (2)

Note you need to show your calculations. In the Appendix, you will find some formulas you need to calculate the energy needs.

2.2. Evaluate Hoze's calculated BMI (in question **2.1. a**) with reference to the standard norms and explain the consequence of this on her BMI as well as health and wellness status. (4)

2.3. Discuss the **two (2)** factors that could impact on the BMR of Anna. (4)

2.4. Comment on Hoze's WHR (calculated in question **2.1 e**). (1)

2.5. Comment on the water intake (in question 2**.1. c**) of Hoze. (2)

2.6. The breakfast Alice had this morning included **two slices of whole wheat bread, a portion of oats porridge and a Granny Smith apple.** In your opinion will these items provide different types of fibre to her diet and what will the effect of the fibres be on her digestive tract? (6)

2.7. Read the table below and match nutrient in column A with the **function/ characteristic/ deficiency of the nutrient** in Column B. Just write down the correct alpha letter/s next to the question number. (12)

Column A	**Column B**
1.1.1. Protein	A. Mainly found in animal food sources
1.1.2. Omega-3 fatty acid	B. Support the vision and assist in the brain development of children.
1.1.3. Zinc	C. Muscle twitches and cramps.
1.1.4. Vitamin C	D. Prevent Spina Bifida
1.1.5. Thiamin	E. Tingling feeling in legs and arms
1.1.6. Calcium	F. It is mainly produced in the colon of a human being.
1.1.7. Iron	G. Alcohol misuse and Wernicke-Korsakoff Syndrome
1.1.8. Vitamin K	H. Spoon shaped nails with ridges
1.1.9. Vitamin A	I. Prevent osteoporosis in postmenopausal women.
1.1.10. Magnesium	J. White spots on your nails
1.1.11. Folic Acid	K. Play a key role in fluid-electrolyte balance in the body of human beings.
1.1.12. Vitamin B12	L. Supporting your immune system as an antioxidant.

2.8. Not all individuals are equally affected by nutrient deficiencies. Match the individuals with their risk for a specific nutrient deficiency. Just write down the correct alpha letter/s next to the question number. [4]

Vitamins	Vulnerable group
2.9.1. Vitamin A	Second hand smokers
2.9.2. B complex vitamins	Young children whose diet contains little fruit and vegetables
2.9.3. Vitamin C	Vegans
2.9.4. Vitamin B12	Alcoholics

[46]

Question 3

Compare and contrast the following nutrition concepts concerning the human diet and nutritional status of individuals:

NOTE: Make sure that you refer to the relationship of "the nutrition concepts" and the human diet and/or nutritional status of individuals in your answer.

3.1. The nutritional benefits of **white sugar versus organic honey**. (3)

3.2. Production of **Vitamin D** by utilising the sun in **dark skinned and light skinned** individuals. (3)

3.3. Extrinsic sugar versus intrinsic sugars (3)

[9]

QUESTION 4

Read the statements below carefully. Decide if they are true or false and mark. Indicate that in your answer and motivate your answer.

4.1. Vitamin A is found in "peaches". (2)

4.2. People on the broad spectrum should be worried about the vitamin K levels in their gut.
(2)

4.3. Sunscreen prevents the synthesis of vitamin D by the body. (2)

4.4. Niacin deficiency is common in Namibia. (2)

[8]

QUESTION 5

5.1. Plant-based diets instead of animal diets are now being promoted by countries like the Netherlands in their Dietary guidelines. Against this background, discuss the importance of complementary protein. (3)

5.2. Describe **three (3)** clinical signs of acute dehydration in children. (3)

5.3. Discuss the relationship between IDD and mental retardation as well as regulations Namibia has put in place to minimize this nutritional problem. (4)

[10]

ANSWER ONE QUESTION

SECTION C

Essay Question: This question will assess a suitable/applicable introduction (2 marks), correct statements/ content (8 marks), reason and logic (8 marks) and an appropriate conclusion (2 marks).

Question 6

6.1. Vitamin C is viewed as the most vulnerable of all vitamins. Describe the reasons why vitamin C are so vulnerable in the food preparation and cooking process. In addition, discuss ways to reduce the loss of vitamin C in the food preparation and cooking process. In your answer, you need to link the characteristics and the ways to minimise the loss. [15]

OR

6.2. Data shows that 40% or more of Namibian adults suffer from high blood pressure. As nutritionist we know that salt and specific sodium in the diet can have an impact on blood pressure levels. Describe how you can limit the intake of table salt and sodium in your diet. In your answer refer to the WHO guidelines for salt in the diet.

Total **[100]**

END OF PAPE5

APPENDIX

EQUATIONS TO ESTIMATE BMR FROM BODY WEIGHT (WT)

Age (Years)	Equations to estimating BMR from body weight (wt in kg) (energy in kJ)	Age (Years)	Equations to estimating BMR from body weight (wt in kg) (energy in kJ)
Males		**Females**	
0-3	(255.8 x wt) - 227	**0-3**	(256.2 x wt) – 214
3-10	(95.3 x wt) + 2079	**3-10**	(94.5 x wt) + 2096
10-18	(73.5 x wt) + 2734	**10-18**	(51.2 x wt) + 3133
18-30	(64.3 x wt) + 2852	**18-30**	(61.7 x wt) + 2083
30-60	(48.7 x wt) + 3692	**30-60**	(36.5 x wt) + 3482
>60	(56.7 x wt) + 2045	**>60**	(44.1 x wt) + 2503

Physical Activity Levels (PAL)

PAL	Type of activity	Male	Female
Very light	Seated and standing activities include driving, laboratory work, typing, cooking, sewing, ironing, playing a musical instrument, doing office work and studying.	1.3	1.3
Light	Walking on a level surface at a slow speed, assisting in shops, waiting tables, house cleaning, child care, playing golf, practising a trade like carpentry	1.6	1.5
Moderate	Walking fast, weeding, hoeing, carrying a load, cycling, playing tennis and dancing.	1.7	1.6
Heavy	Walking with a load uphill, tree felling, heavy manual digging, climbing and playing soccer.	2.1	1.9
Very heavy	Athletes training for professional and world-class events.	2.4	2.2

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FACULTY	Health Sciences and Veterinary medicine
DEPARTMENT	Psychology and Social Work
SUBJECT	Neuropsychology
SUBJECT CODE	PSY5942
DATE	November 2024
DURATION	3 HOURS
MARKS	100

SECOND OPPORTUNITY EXAMINATION

EXAMINER : **Dr. A. A. van der Merwe (University of Namibia)**

INTERNAL MODERATOR: **Prof Poonam Dhaka (University of Namibia)**

This paper consists of 3 pages including the cover page.

Instructions:

1. Answer all questions.
2. Number your answers according to the numbering structure provided in the examination question paper and answers should be numbered in the same order as provided in the examination paper.

Question 1

Answer the following questions on Neuropathology

1.1 What is the effect of long-term excessive alcohol abuse on the brain? (5)

1.2 What is the impact of poor nutrition on the brain? (Make reference also to the nutrients) (5)

1.3 Explain what an Ischemic Stroke is and give an indication of possible contributing factors that may lead to this condition. (5)

1.4 Explain Vascular Dementia and different mechanisms how it is formed. (5)

1.5 Name different types of cortical dementias. (5)

1.6 In short, explain how Parkinson's disease develops (also mention the brain structures affected). (5)

1.7 Name five conditions that might be associated with Secondary Brain Injury. (5)

1.8 Discuss possible neuropathology associated with HIV. (5)

Question 2

Discuss the two forms of Agnosia. (6)

Question 3

Discuss the difference between the aphasias associated with Broca's area and Wernicke's are. (4)

Question 4

Describe two main brain structures of the diencephalon and the main functions of each. (6)

Question 5

Discuss the difference between the primary and secondary (association) somatosensory cortex.

(4)

Question 6

In table format, indicate four functional dichotomies of the right and left hemispheres of the brain.

(8)

Question 7

A 37-year old male client is referred to you by his GP. He is accompanied by his partner who reports that the client was in a motor vehicle accident six months ago. The client has had a severe TBI to the prefrontal cortex.

Discuss **in full** the process that you would follow assessing the client, including which specific psychometric tests (and subtests) you would use. Motivate the inclusion of each psychometric test and subtest, as well as the process that is followed.

Indicate in full what you would possibly expect of the client's functioning and how this will be accounted for in the assessment.

(25)

Question 8

Name and discuss the functions the brain structures that are activated in writing this exam.

(7)

[Total: 100]

The End.