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NOVEMBER EXAMINATION

PROGRAMME : HUMAN MOVEMENT STUDIES

MODULE NAME : KINESIOLOGY

MODULE CODE : KIN 01B1 / BIK 01Y1

DATE : 22 NOVEMBER 2017

DURATION : 2 HOURS

TOTAL MARKS : 120

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NUMBER OF PAGES : SEVEN (7) PAGES

INSTRUCTIONS TO CANDIDATES:

ANSWER ALL THE QUESTIONS.

SECTION A IS WELLNESS AND SPORT INJURIES.

SECTION B IS MEASUREMENT AND EVALUATION.

SECTION A: WELLNESS AND SPORT INJURIES (50 MARKS)

QUESTION 1 (10 MARKS)

- 1.1 A compound fracture is one which:
 - a.) Breaks the skin
 - b.) Does not pierce the skin
 - c.) Does not cause complete breakage of the bone
 - d.) Punctures internal organs
- 1.2 The type of fracture in which the bone that is attached to muscles or ligaments has been torn away is called a
 - a.) Comminuted fracture
 - b.) Compound fracture
 - c.) Avulsion fracture
 - d.) Greenstick fracture
- 1.3 The "c" in the recommended treatment for injuries stands for:
 - a.) Cooling
 - b.) Compression
 - c.) Composure
 - d.) Call for help
- 1.4 Cross-training can be defined as:
 - a.) Training more than once a day
 - b.) Training when you are angry
 - c.) Training in different climates and at different altitudes
 - d.) Training in two or more sports to improve fitness and performance
- 1.5 Delayed onset of muscle soreness (DOMS) occurs approximately _____ hours after strenuous exercise.
 - a.) 24
 - b.) 72
 - c.) 48-72
 - d.) 24-48
- 1.6 In a grade II muscle strain, how much of the musculotendinous unit is torn?
 - a.) 15-20%
 - b.) >70%
 - c.) 50%
 - d.) 20-70%
- 1.7 Which of the following is not an example of a performance-enhancing drug?
 - a.) Cannabis
 - b.) Diuretics
 - c.) Caffeine

d.) Amphetamines

1.8 Which of the following ingredients found on a food label is most likely to contribute to health issues:

- a.) Gluten
- b.) Coconut or palm oil
- c.) Potassium
- d.) Calories

1.9 Obesity refers specifically to having an abnormally high proportion of body fat (a mass index of ____).

- a.) >30
- b.) >24.9
- c.) ≥ 24.9
- d.) ≥ 30

1.10 _____ is determined by the four FITT dimensions.

- a.) Specificity
- b.) Maintenance
- c.) Overload
- d.) Regression

QUESTION 2 (18 MARKS)

2.1 Identify four (4) signs of inflammation. [4]

2.2 Identify three (3) ways to prevent injuries. [3]

2.3 Identify the types of fractures from the following x-rays: [3]

a.



[24]

b.



C.



2.4 List four (4) types of pain and use examples to describe each. [8]

QUESTION 3 (9 MARKS)

3.1 Look at the Pretzels food label below and a.) Identify the largest ingredient (1), b.) Calculate the calories that come from fat (1), c.) Calculate the calories that come from carbohydrate (1), and d.) Calculate the calories that come from protein (1) [4]

Pretzels

Nutrition Facts			
Serving Size 17 pieces (28g)			
Servings Per Container 10			
Amount Per Serving			
Calories 110		Calories from fat 15	
		% Daily Value*	
Total Fat 1.5g			2%
Saturated Fat 0g			0%
Cholesterol 0mg			0%
Sodium 600mg			25%
Total Carbohydrate 21g			7%
Dietary Fiber less than 1 g			3%
Sugars 1g			
Protein 3g			
Vitamin A 0%	-	Vitamin C 0%	
Calcium 0%	-	Iron 6%	
*Percent daily values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:			
Calories	2,000	2,500	
Total Fat	Less than 65g	80g	
Saturated Fat	Less than 20g	25g	
Cholesterol	Less than 300mg	300mg	
Sodium	Less than 2,400mg	2,400mg	
Total Carbohydrate	300g	375g	
Dietary Fiber	25g	30g	
Calories per gram:			
Fat 9 • Carbohydrate 4 • Protein 4			

INGREDIENTS: ENRICHED WHEAT FLOUR (CONTAINS IRON AS FERROUS SULFATE, NIACIN, THIAMINE MONONITRATE, RIBOFLAVIN), SALT, VEGETABLE OIL (COTTONSEED AND/OR PARTIALLY HYDROGENATED SOY-BEAN) CORN SYRUP SOLIDS, CORN SYRUP, CARAMEL COLORING, YEAST, SODIUM BICARBONATE AND SODIUM CARBONATE.

3.2 Look at the Potato Chips food label below and a.) Identify the largest ingredient (1), b.) Calculate the calories that come from fat (1), c.) Calculate the calories that come from carbohydrate (1), and d.) Calculate the calories that come from protein (1) [4]

Potato Chips

Nutrition Facts	
Serving Size 1 oz. (28g/about 18 chips)	
Servings Per Container 6	
Amount Per Serving	
Calories 150	Calories from fat 90
% Daily Value*	
Total Fat 10g	10%
Saturated Fat 2.5g	14%
Cholesterol 0mg	0%
Sodium 120mg	5%
Total Carbohydrate 15g	5%
Dietary Fiber less than 1 g	4%
Sugars 0g	
Protein 2g	
Vitamin A 0%	Vitamin C 10%
Calcium 0%	Iron 2%
*Percent daily values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Saturated Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9 • Carbohydrate 4 • Protein 4	

INGREDIENTS: POTATOES, VEGETABLE OIL (CONTAINS ONE OR MORE OF THE FOLLOWING: CANOLA, CORN, COTTONSEED, OR PARTIALLY HYDROGENATED [CANOLA, SOYBEAN OR SUNFLOWER] OIL.), AND SALT

NO PRESERVATIVES

3.3 Comparing the two food labels, which product would you recommend is the better option for consumers? [1]

Pretzels

Nutrition Facts	
Serving Size 17 pieces (26g)	
Servings Per Container 10	
Amount Per Serving	
Calories 110	Calories from fat 15
% Daily Value*	
Total Fat 1.5g	2%
Saturated Fat 0g	0%
Cholesterol 0mg	0%
Sodium 600mg	25%
Total Carbohydrate 21g	7%
Dietary Fiber less than 1 g	3%
Sugars 1g	
Protein 3g	
Vitamin A 0%	Vitamin C 0%
Calcium 0%	Iron 6%
*Percent daily values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Saturated Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9 • Carbohydrate 4 • Protein 4	

INGREDIENTS: ENRICHED WHEAT FLOUR (CONTAINS IRON AS FERROUS SULFATE, NIACIN, THIAMINE MONONITRATE, RIBOFLAVIN), SALT, VEGETABLE OIL (COTTONSEED AND/OR PARTIALLY HYDROGENATED SOYBEAN), CORN SYRUP SOLIDS, CORN SYRUP, CARAMEL COLORING, YEAST, SODIUM BICARBONATE AND SODIUM CARBONATE.

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NO PRESERVATIVES

QUESTION 4 (15 MARKS)

4.1 Discuss five ways exercise helps in weight management. [5]

4.2 List (5 marks) the five (5) health-related components of fitness and provide an example (5 marks) of an exercise for each. [10]

QUESTION 5 (8 MARKS)

5.1 List the five (5) stages of the Transtheoretical Model for Health Behavior Change. [5]

5.2 List three (3) Sustainable Development Goals as proposed by the United Nations. [3]

[60]

SECTION B: MEASUREMENT AND EVALUATION (60 MARKS)

QUESTION 1 (10 MARKS)

1.1 List and describe two (2) methods of taking a resting heart rate. [4]

1.2 Provide the procedures for skinfold measurement. [6]

QUESTION 2 (10 MARKS)

State whether the following is true or false.

2.1. Weight should be measured on a scale to the nearest 0.5kg.

2.2. The most accurate way to measure height is to use a long measuring tape from the ground to the top of the head.

2.3. An extremely obese person may contribute to a measurement error while taking skinfolds.

2.4. Acute Muscle tissue inflammation is an absolute factor that prevents exercise testing.

2.5. A BMI value within the range of 18.5-24.9 is considered normal.

2.6. An example of a muscular endurance test is the 1 repetition maximum.

2.7. Maximal oxygen uptake or VO₂max is defined as an individual's maximum capacity to consume oxygen and further, to utilise this oxygen at a cellular level.

2.8. Submaximal exercise testing of a moderate risk subject requires supervision by a physician.

2.9. Clothing should not permit freedom of movement during testing.

2.10 Flexibility is the ability to move a joint through its complete Range of motion.

QUESTION 3 (7 MARKS)

Complete the table below regarding norms for single joint range of motion movements in degrees.

[7]

Joint Movement	Degrees (normal ranges)
Shoulder Flexion	a.)
Shoulder Extension	b.)
Hip Flexion	c.)
Hip Extension	d.)
Knee Flexion	e.)
Ankle Plantarflexion	f.)
Ankle Dorsiflexion	g.)

QUESTION 4 (7 MARKS)

Provide seven (7) Participant instructions you as an exercise tester would give your client before administering the exercise test.

[7]

QUESTION 5 (8 MARKS)

Name and discuss any four (4) important components of the medical history.

[8]

QUESTION 6 (8 MARKS)

List eight (8) absolute factors/conditions that prevent exercise testing from taking place.

[8]

QUESTION 7 (5 MARKS)

Provide the basic steps that must be followed in order to conduct a 1 repetition maximum test for strength.

[5]

QUESTION 8 (5 MARKS)

List five (5) popular sprint test distances used to test the speed and acceleration of an athlete.

[5]

[60]

TOTAL: 120 MARKS