



NOVEMBER EXAMINATION

<u>PROGRAM</u>	:	BACHELOR OF BIOKINETICS
<u>MODULE NAME</u>	:	BIOKINETICS 2
<u>MODULE CODE</u>	:	BIK 01Y2
<u>DATE</u>	:	13 NOVEMBER 2017
<u>DURATION</u>	:	THREE (3) HOURS
<u>TOTAL MARKS</u>	:	150 MARKS

<u>EXAMINERS</u>	:	MS L VAN ROOY & PROF L LATEGAN
<u>MODERATOR</u>	:	PROF B SHAW
<u>NUMBER OF PAGES</u>	:	FOUR (4) PAGES

INSTRUCTIONS TO CANDIDATES:

MAKE SURE THAT YOU HAVE THE COMPLETE PAPER.

ANSWER ALL THE QUESTIONS.

COMPLETE SECTIONS A AND B IN SEPARATE BOOKLETS

SECTION A IS CHRONIC DISEASE AND WELLNESS.

SECTION B IS SPORTS INJURIES AND ORTHOPAEDIC CONDITIONS.

SECTION A (CHRONIC DISEASE AND WELLNESS) – 75 MARKS

QUESTION 1

[15]

1.1 Define the following terms:

1.1.1 Antecubital space (2)

1.1.2 Ambulation (1)

1.1.3 Volitional fatigue (1)

1.1.4 Eustress (1)

1.1.5 Wellness (2)

1.1.6 Occult (1)

1.1.7 Aortic stenosis (1)

1.2 Briefly explain the three (3) stages of the stress response. (6)

QUESTION 2

[10]

2.1 List the ten (10) change strategies. ($10 \times \frac{1}{2} = 5$)

2.2 Discuss five (5) examples of wellness programmes that corporations might offer their employees. **Note: point form, listing or naming will not be accepted.** (5)

QUESTION 3

[25]

3.1 List the multistage pre-participation health screening process (3 marks) and explain why each stage is important (3 marks), also making use of assessment examples under each stage (3 marks). (9)

3.2 Tabulate the atherosclerotic CVD risk factors (8 marks) and its defining criteria (8 marks). (16)

QUESTION 4

[25]

Natalie is a 55-year-old female receptionist with hypertension and a neuromotor disorder that is exacerbated by exercise. She currently has no membership at a health facility and does not engage in physical activity.

Blood pressure: 138/90 mmHg

Heart rate: 88 bpm

*Rate pressure product: 12 144 mmHg*bpm*

Glucose: 4.8 mmol/l

Cholesterol: 5.1 mmol/l

4.1 Work out whether this patient is high, moderate or low risk based on the CAD Risk Stratification by the ACSM (2016). (1)

- 4.2 According to the above information, Natalie also presents with a comorbid condition. Is this an absolute or relative contraindication to exercise? (1 mark) Define this (1 mark). (2)
- 4.3 Natalie's ECG shows up as normal. Draw and label what her ECG would look like. (6)
- 4.4 What mode of exercise testing would you use in your assessment of Natalie's cardiorespiratory fitness and why? (2)
- 4.5 List and explain the components of an exercise programme (8 x ½ marks). Include atleast two (2) examples under each component, relevant to the case study (8 marks). (12)
- 4.6 Provide this patient with relevant advice to increase her physical activity levels over and above the prescribed programme you have given her. (2)

SECTION B: SPORTS INJURIES AND ORTHOPAEDIC CONDITIONS [75 MARKS]

QUESTION 1 [5]

Describe the different types of overuse injuries commonly found in sport and use applicable examples to substantiate your answer.

QUESTION 2 [5]

Explain the use of heat in treating sports injuries

QUESTION 3 [15]

Explain the three (3) Biokinetic rehabilitation phases following a traumatic sports injury.

QUESTION 4 [50]

Describe the following injuries or conditions in terms of traumatic or overuse, anatomical damage (pathology), symptoms and possible causes:

- 4.1 Sciatica & herniated disc (10)
- 4.2 Sacro-iliac dysfunction (10)
- 4.3 Sever's disease (6)
- 4.4 Plantar fasciitis (10)
- 4.5 Golfer's elbow (14)

TOTAL: 150 MARKS