UNIVERSITY
OF
JOHANNESBURG

PROGRAM : NATIONAL DIPLOMA

SOMATOLOGY

MODULE : BIOTICS I

CODE : BIT101

DATE : FINAL THEORY EXAM

27 NOVEMBER 2017

DURATION : 180 MINUTES

08H30 – 11H30

WEIGHT : 50 : 50

TOTAL MARKS : 130

EXAMINER : MS. L. BERRIMAN
MODERATOR : MRS N. MATHENJWA

NUMBER OF PAGES : 3

INSTRUCTIONS TO CANDIDATES:
PLEASE ANSWER ALL THE QUESTIONS.
USE THE MARK ALLOCATION AS AN INDICATION AS TO HOW MUCH
INFORMATION YOU MUST PROVIDE.

GOOD LUCK!

QUESTION 1

List three (3) methods to determine fat percentage of the human body   (3)

[3]

QUESTION 2

2.1 **Identify** and **discuss** the three (3) types of muscle tissue. Include their **location** in the human body, **appearance, structure** and **type of contraction** produced.   (25)

2.2 Clarify four (4) important roles that muscles play in the human body.   (4)

[29]

QUESTION 3

3.1 Highlight and explain five (5) important functions of bones.   (10)

3.2 **Name** and **describe** four (4) types of bones, classified according to shape and provide **two (2) examples of each type.**   (16)

3.3 List the two (2) groups that bones are classified under.   (2)

[28]

QUESTION 4

Tamara is interested in starting some sort of fitness training but needs guidance in making her decision. You can aid Tamara in her quest by answering the following questions.

4.1 Discuss the benefits of regular stretching to Tamara.   (12)

4.2 Identify three (3) benefits of aerobic exercise.   (3)

4.3 **Strength training is a very important aspect of a rounded exercise routine**. Enlighten Tamara as to why strength training is important, by providing her with the benefits of strength training.   (3)

4.4 Identify the four (4) elements of a rounded fitness training routine.   (4)

[22]

QUESTION 5

Discuss the following classes of levers in detail and provide examples found in the human body.

5.1 First-class lever   (10)
5.2 Third-class lever   (5)
5.3 Second-class lever   (6)

[21]

QUESTION 6

Good posture is essential to health and well-being. Provide answers to the following questions relating to posture.

6.1 Provide eight (8) reasons for maintaining good body posture.   (8)
6.2 Define "perfect posture".   (5)
6.3 Highlight the characteristics of poor posture.   (6)

[19]

QUESTION 7

Describe the Mesomorph in detail.   (8)

[8]