



**PROGRAM** : NATIONAL DIPLOMA  
*SOMATOLOGY*

**MODULE** : BIOTICS I

**CODE** : BIT101

**DATE** : SUPPLEMENTARY THEORY EXAM  
10 JANUARY 2018

**DURATION** : 180 MINUTES  
08H00 – 11H00

**WEIGHT** : 50 : 50

**TOTAL MARKS** : 130

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**EXAMINER** : MS. L. BERRIMAN

**MODERATOR** : MRS N. MATHENJWA

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**NUMBER OF PAGES** : 4

**INSTRUCTIONS TO CANDIDATES:**

PLEASE ANSWER ALL THE QUESTIONS.

USE THE MARK ALLOCATION AS AN INDICATION AS TO HOW MUCH INFORMATION YOU MUST PROVIDE.

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GOOD LUCK!

## **QUESTION 1**

Define the following kinesiology terms:

- 1.1 Posterior (1)
- 1.2 Distal (1)
- 1.3 Anatomical position (4)
- 1.4 Lateral (1)
- 1.5 Proximal (1)
- 1.6 Anterior (1)
- 1.7 Superior (2)
- 1.8 Inferior (2)
- 1.9 Medial rotation (1)
- 1.10 Lateral bending (1)
- 1.11 Radial deviation (2)
- 1.12 Plantar flexion (1)
- 1.13 Pronation (2)

**[20]**

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## **QUESTION 2**

- 2.1 Highlight and explain five (5) important functions of bones. (10)
- 2.2 **Name** and **describe** four (4) types of bones, classified according to shape and provide **two (2) examples of each type.** (16)
- 2.3 List the two (2) groups that bones are classified under. (2)
- 2.4 Identify two (2) bony landmarks of the clavicle. (2)

**[30]**

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### **QUESTION 3**

Redraw this table and provide the relevant information under the headings.

<b>Muscle</b>	<b>Origin</b>	<b>Insertion</b>	<b>Action</b>
3.1 Trapezius	(2)	(2)	(1)
3.2 Deltoid	(2)	(2)	(2)
3.3 Latissimus dorsi	(2)	(2)	(1)
3.4 Triceps	(4)	(1)	(1)
3.5 Gastrocnemius	(1)	(1)	(1)

**[25]**

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### **QUESTION 4**

Diarthrotic joints are described according to the amount of movement they allow.

**Name** and **describe** four (4) diarthrotic / synovial joints and provide **an example** of each. (12)

**[12]**

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### **QUESTION 5**

Mpho would like to book for a session for you to do muscle testing on her and advise her on relevant exercises. She requires more information before making a booking with you.

- 5.1 List five (5) muscles the Somatologist will test for shortness. (5)
- 5.2 Highlight five (5) muscles Somatologist will test for weakness. (5)
- 5.3 Discuss the role of the therapist when shortened muscles are identified. (5)
- 5.4 Discuss the role of the therapist when weakened muscles are identified. (5)

**[20]**

**QUESTION 6**

Highlight and describe the various anthropometrical tools used to measure the body. (10)

**[10]**

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**QUESTION 7**

7.1 Describe the Endomorph in detail. (8)

7.2 List two other somatotypes other than the Endomorph. (2)

7.3 Define somatotyping. (3)

**[13]**

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