

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

SSC1107

FACULTY OF APPLIED SCIENCES

BACHELOR OF SCIENCE HONOURS DEGREE EXAMINATIONS

DEPARTMENT OF SPORTS SCIENCE AND COACHING

THEORY: SSC1107: PRINCIPLES OF HUMAN ANATOMY

JANUARY 2011

3 HOURS (100 MARKS)

INSTRUCTIONS

Answer 4 questions only. Each question carries 25 marks. Where a question contains subdivisions, the mark value for each subdivision is given in brackets. Illustrate your answer where appropriate with large clearly labeled diagrams.

1. With reference to the upper and the lower limb;
 - a) Compare the similarities. [3 marks]
 - b) Contrast the functional differences. [4 marks]
 - c) Highlight the functional differences. [8 marks]
 - d) Compare five movements that each can realize. [10 marks]

2. What do you understand by the following terms:-
 - a) Fast twitch fibres. [5 marks]
 - b) Slow twitch fibres. [5 marks]
 - c) With examples, explain the different types of muscle. [9 marks]
 - d) List the different parts of skeletal muscle. [6 Marks]

3. With the aid of a diagram, describe the structure and processes of the digestive system. [25 marks]

4.
 - a) Discuss the breathing mechanism. [15 marks]
 - b) Discuss the characteristic changes that take place to inspired air between the atmosphere and the blood cells during respiration. [10 marks]

5. "The endocrine system plays a regulatory action on the reproductive cycle..."
 - a) Briefly discuss the above statement. [5 marks]
 - b) Discuss the organization of the following:
 - i. The pituitary glands. [10 marks]
 - ii. Adrenal (suprarenal) glands. [10 marks]

6. a) How is the heart adapted for its function? [10 marks]
b) Compare and contrast the structures of veins and arteries. [10 marks]
c) Describe the components of blood. [5 marks]

END OF EXAMINATION