

THE UNIVERSITY OF SWAZILAND
FACULTY OF HEALTH SCIENCES
GENERAL NURSING SCIENCE DEPARTMENT
FINAL EXAMINATION: DECEMBER 2013

COURSE TITLE:	HUMAN ANATOMY AND PHYSIOLOGY 1
COURSE CODE:	HSC 116
MARKS ALLOCATED	75
TIME ALLOWED	TWO (2) HOURS

INSTRUCTIONS:

- 1. THERE ARE TWO SECTIONS IN THIS PAPER.**
 - i) SECTION 1A IS MULTIPLE CHOICE**
 - ii) SECTION 1B IS TRUE AND FALSE**
 - iii) SECTION 2 IS SHORT ANSWERS**

- 2. PLEASE ANSWER ALL SECTIONS**
 - i) SECTION 1 CARRIES 30 MARKS**
 - ii) SECTION 2 CARRIES 45 MARKS**

- 3. USE ANSWER BOOK FOR ALL YOUR ANSWERS.**

NB: PLEASE DO NOT OPEN YOUR QUESTION PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR.

Section 1A

MULTIPLE CHOICE

For each of the following questions/statements, choose the most correct response and write it in your answerer book. eg. 1=D

1. **Peter was playing tennis when he slipped and fell; he dislocated his glenohumeral joint; which cartilage is most likely to be injured in this accident?**
 - A. Fibrous cartilage
 - B. Hyaline cartilage
 - C. Elastic cartilage
 - D. Both A and B

2. **Which of the following is not an example of positive feedback?**
 - A. Central heating system in a house.
 - B. Control of blood sugar in humans.
 - C. Control of bleeding through the process of clotting.
 - D. None of the above

3. **The following are examples of macroscopic anatomy except.**
 - A. Cytology
 - B. Systemic anatomy
 - C. Surface anatomy
 - D. Regional anatomy

4. **This step of tissue repair, organization, is characterized by which of the following?**
 - A. Release of inflammatory chemicals.
 - B. Clot formation
 - C. Clot is replaced by regenerating tissue.
 - D. Growth of epithelial tissue under the scab.

5. **Which of the following tissue has excellent regeneration capacity?**
 - A. Nervous tissue
 - B. Neurons
 - C. Skeletal tissue.
 - D. Epithelial tissue

6. **Which of the following membranes is not an example of serous membrane?**
 - A. Parietal membrane.
 - B. Cutaneous membrane.
 - C. Cardiac membrane.
 - D. Periosteum membrane.

7. **The following, are fibrous, structural elements of connective tissue except.**
- A. Elastic tissue.
 - B. Reticular tissue.
 - C. Fibroblast
 - D. Cartilage
8. **Which is the most abundant tissue in the human body?**
- A. Epithelium tissue
 - B. Connective tissue
 - C. Glandular epithelium
 - D. Muscle tissue
9. **Sindie was playing volley ball, when she fell on an out stretched hand and injured her tendon. Which type of tissue was injured in this fall?**
- A. Loose connective tissue
 - B. Irregular connective tissue
 - C. Areolar connective tissue
 - D. Dense regular connective tissue
10. **Which are the strongest and largest tendons in the human body?**
- A. Calcaneus tendon
 - B. Achilles tendon
 - C. Quadriceps femoris tendon
 - D. Both A and B
11. **Cytology is:-**
- A. The study of cells and their abnormalities.
 - B. The study of bones.
 - C. Study of body tissues
 - D. None of the above.
12. **Which of the following planes divide the body into left and right?**
- A. Transverse plane
 - B. Horizontal plane
 - C. Frontal plane
 - D. Sagittal plane

13. Which cavity houses the urinary bladder?

- A. Thoracic cavity
- B. Cardiac cavity
- C. Cranial cavity
- D. Pelvic cavity

14. What would happen to a body cell when immersed in an isotonic solution?

- A. It will shrink
- B. It will burst
- C. It will swell
- D. It will remain the same

15. Connective tissue is mainly found in which organ of the body?

- A. Bones
- B. Muscle
- C. Skin
- D. Blood vessels

16. Which cartilage forms the epiglottis, the part that covers the opening of the respiratory tract?

- A. Fibrous cartilage
- B. Elastic cartilage
- C. Both A and B
- D. Hyaline cartilage

Situation I

After sitting for hours in a meeting the chairperson gives you a minute to stretch, already exhausted, you seat back in your chair yawning out loud, suddenly you heard a click sound and you are unable to close your mouth. Based on this scenario, answer question 17 and 18.

17. Which articulation is affected?

- A. Wrist joint
- B. Temporal suture
- C. parietal suture
- D. Temporomandibular joint

18. Which bones form the articulation in the above scenario?

- A. The hyoid and cervical bone
- B. The cervical and occipital bone
- C. The temporal and maxilla bone
- D. The mandibular and temporal bone

Scenario:-

Clients who attend the hospital for their illnesses are usually taken for a routine blood count, test.

What is the normal range for erythrocytes per millimeter cube in healthy adults?

- 19. A. 4-6 million
 - B. 5- 7 million
 - C. 3- 4 million
 - D. 1-3 million
20. **What is the normal range for leukocytes per millimeter cube in healthy adults?**
- A. 7000-12000
 - B. 6000 – 11000
 - C. 4800- 10 800
 - D. 3 800 – 9 800

SECTION 2

QUESTION 1

A. Briefly discuss the following homeostatic imbalances of the integumentary system. (10 Marks)

- (i) Melanoma (4)
- (ii) Second degree burns (2)
- (iii) Acne (2)
- (iv) White head (2)

B. Differentiate between the skull and the cranium and further state the bones of the cranium and their articulation. (10 Marks)

(Total 20 Marks)

QUESTION 2.

A. Using information learned during your Human Anatomy class, please compare the skeleton of the hand with that of the foot using column A for the hand and column B for the foot. (10 Marks)

B. What is the difference between serous and mucous membrane? (2)

C. Describe the typical macroscopic structure of the skeletal muscles. (8)

(10 Marks)

D. Briefly state five functions of the bones.

(5 Marks)

(Total 25 Marks)