

UNIVERSITY OF ESWATINI  
FACULTY OF HEALTH SCIENCES  
GENERAL NURSING SCIENCE DEPARTMENT  
FINAL EXAMINATION: DECEMBER, 2019

COURSE TITLE;                HUMAN ANATOMY AND PHYSIOLOGY 1  
COURSE CODE:                GNS 115  
TIME ALLOCATED:            TWO (2) HOURS  
MARKS ALLOCATED:        75  
TOTAL NO. OF PAGES:      6

**INSTRUCTIONS:**

1. THERE ARE TWO SECTIONS IN THIS PAPER.
  - i) SECTION 1 A. MULTIPLE CHOICES  
      B. MATCHING  
      C. TRUE AND FALSE
  - ii) SECTION 2 IS SHORT ANSWERS AND ESSAYS
2. PLEASE ANSWER ALL SECTIONS
  - ii) SECTION I CARRIES        45 MARKS
3. USE ANSWER BOOKLET FOR ALL YOUR ANSWERS
4. DO NOT OPEN YOUR QUESTION PAPER UNTIL PERMISSION HAS BEEN GRANTED BY INVIGILATOR.

## SECTION 1A

### A. MULTIPLE CHOICE QUESTIONS:-

( 25 MARKS)

For each of the following questions/statements, choose the most appropriate response and write the alphabet in your answer book. e.g. 1 = C

1. Which of the following is not the function of the skin?
  - A. Temperature control
  - B. Sense of touch
  - C. Blood reservoir
  - D. Water reservoir
  
2. Which is the most dangerous skin cancer?
  - A. Melanoma
  - B. Basal cell carcinoma
  - C. Squamous cell carcinoma
  - D. Both A and C
  
3. Which of the following cancers is mostly found on the face?
  - A. Squamous cell carcinoma
  - B. Melanoma
  - C. Cancer of the skin
  - D. Basal cell carcinoma
  
4. Which of the following is responsible for forming the epithelial tissue?
  - A. Columnar cells
  - B. Cuboidal cells
  - C. Osteocytes
  - D. Both A and B
  
5. Which of the following is the physiology of epithelial tissue?
  - A. Attached muscle to bone
  - B. Attaches bone to bone
  - C. Covers the bone
  - D. Covers the body exterior

6. Which is the most abundant tissue in the human body/  
A. The osseous tissue  
B. The connective tissue  
C. The nervous tissue  
D. The epithelial tissue
7. Which alphabets represent the cardinal signs of melanoma?  
A. BCDEF  
B. ABCDE  
C. ABCD  
D. Both A and B
8. Which of the following gland's secretion is odorous?  
A. Apocrine  
B. Sebaceous  
C. Ceruminous  
D. Eccrine
9. Cyanosis is caused by impairment of which body system?  
A. The integumentary system  
B. The digestive system  
C. The circulatory system  
D. The reproductive system
10. Which organ of the body serves as the laundry machine for blood?  
A. The heart  
B. The lungs  
C. The kidney  
D. The intestines
11. Which of the following bones articulate with the tibia and the acetabulum?  
A. Fibular  
B. Humerus  
C. Femur  
D. Ulna

12. This bone is responsible for forming the human elbow.

- A. Tibia
- B. Ulna
- C. Fibula
- D. Humerus

13. Apocrine glands are abundant in the...

- A. Forehead
- B. Axilla
- C. Palms
- D. Chest

14. Which is the largest pelvic bone?

- A. Acetabulum
- B. Ischium
- C. ilium
- D. Pubic

15. The physiology of bones are the following **except**.

- A. Protection
- B. Blood cell formation
- C. Stores potassium
- D. Movement

16. This joint is susceptible to laxation?

- A. Knee
- B. Elbow
- C. Shoulder
- D. Hip

17. The human body originates form ...

- A. Cells
- B. Tissues
- C. Organs
- D. Atoms

18. The smallest functional unit of the body is the.....

- A. Cells
- B. Tissues
- C. Organs
- D. Atoms

19. Anatomy is the scientific study of .....

- A. Cells
- B. Tissues
- C. Body structure and their relationship
- D. Body functions and their imbalances

20. Histology is the scientific study of the.....

- A. Human body
- B. Body systems
- C. Body cells
- D. Body tissues

**Scenario 1**

Your sister Sanele, has just completed her high school education. She is waiting for her results to start her college education. Currently she is working part-time in butchery. Two days ago, she accidentally chopped her forearm with an electrical saw. Based on scenario, Answer question one 20 to 25.

21. How many bones were chopped off intact in this accident?

- A. 8
- B. 13
- C. 20
- D. 27

22. Which bone/s was injured in this accident?

- A. Carpals
- B. Radius
- C. Ulna
- D. Radius and ulna

23. How many phalanges did Sanele loose in the accident?

- A. 10
- B. 14
- C. 28
- D. None

24. How many carpals were chopped off?

- A. 5
- B. 14
- C. 8
- D. 2

25. How many metacarpals were chopped off?

- A. 5
- B. 14
- C. 8
- D. 2

## SECTION 1B

### MATCHING

10 MARKS

Read the statements in column A and match it with the correct response in column B and write it in your answer book e.g. 1= C

COLUMN A	COLUMN B
1. Ulceration of the skin due to interference with blood supply	A. Orthopedist
2. This layer is active in mitosis	B. Extension
3. Glands abundant in soles and palms of the human body	C. Dermatologist
4. Increase angle between bones.	D. Abduction
5. Scientific study of tissues	E. Adduction
6. Integumentary specialist	F. Melanocytes
7. Bone specialist	G. Decubitus ulcer
8. Movement of limb away from midline	H. Eccrine glands
9. Movement of limb towards midline	I. Histology
10. Determine skin colour	J. Basal epithelium
	K. Apocrine glands

SECTION 1C

10 MARKS

TRUE AND FALSE

Read the statements below and write T for true and F for false in your answer sheet e.g. 1. = T

1. Excessive production of osteoclast over osteoblast will result in weak bones.
2. Osteomalacia is hardening of bones due to excessive minerals.
3. The ear lobe is made of elastic cartilage.
4. The greater sciatic notch is located in the ilium.
5. The female pubic angle is 20-30 degrees larger than the male pelvis.
6. The most secured joint in the human body is the pelvic joint.
7. The genohumeral joint is prone to luxation.
8. Abduction is movement of a limb towards midline
9. Flexion decreases an angle between two bones.
10. Anatomical position is a reference when studying Anatomy.

SECTION 2

SHORT ANSWER QUESTIONS

25 MARKS

- 2.1 Describe the physiology of bones. (5)
- 2.2. Describe the typical structure of the cell membrane. (10)
- 2.3 Using the rule of nine allocate 100 % burns to affected regions. (10)