

UNIVERSITY OF SWAZILAND

FACULTY OF HEALTH SCIENCES

GENERAL NURSING SCIENCE DEPARTMENT

SUPPLEMENTARY EXAMINATION: JANUARY 2017

COURSE TITLE:	HUMAN ANATOMY AND PHYSIOLOGY I
COURSE CODE:	GNS 115
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 MATCHING
 - 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

(SECTION 1 TOTAL 30 MARKS)

MULTIPLE CHOICES

For each of the following questions, choose the most correct response and write it in your answer book. e.g. 1=D

1. Plantar and dorsiflexion result in upward and downward movement of which joint?
 - A. Shoulder joint
 - B. Ankle joint
 - C. Wrist joint
 - D. Hip joint

2. Vertebrochondral ribs are also called...
 - A. False ribs
 - B. Floating ribs
 - C. True ribs
 - D. None of the above

3. The sacrum is formed by how many bones of the vertebra?
 - A. Seven vertebra
 - B. Five loose vertebra
 - C. Five fused vertebra
 - D. Twelve vertebra

4. Which is the largest body cavity?
 - A. Cranial
 - B. Pelvic
 - C. Thoracic
 - D. Abdominal

5. Which of the following structures are hydrophilic?
 - A. Proteins
 - B. Phospholipid heads
 - C. Phospholipid tails
 - D. Glycocalyx

6. Which of the following cartilage is the most abundant in the human body?
 - A. Fibrous
 - B. Hyaline
 - C. Elastic
 - D. Symphises

7. Which membrane covers the bone surface on the outside?
 - A. Endosteum
 - B. Periosteum
 - C. Parietal
 - D. Peritoneal

8. The smallest functional unit of bones is the...
 - A. Nephron
 - B. Cell
 - C. Osteon
 - D. Sarcomere

9. Which of the following is an organic component of bone formation?
 - A. Osteoblast
 - B. Osteoclast
 - C. Osteocytes
 - D. Calcium

10. The reason for researchers to use bones of individuals who died centuries ago.
 - A. Bones have salt preservation in them.
 - B. Bones can stand torsion
 - C. Bones are half as strong as steel.
 - D. Bones are as strong as steel.

11. Epiphyseal closure in females occurs at what age?
 - A. 20 years
 - B. 18 years
 - C. 21 years
 - D. 12 years

12. Which hormone is responsible for feminization of specific parts of the skeleton?
 - A. Testosterones
 - B. Estrogen
 - C. Thyroid hormone
 - D. Growth hormone

13. Osteomalacia is ...
 - A. Bone growth
 - B. Gigantism
 - C. Porous bones
 - D. Bone softening

14. A depressed fracture usually occurs on the...
- A. Femur
 - B. Head of femur
 - C. Skull
 - D. Tibia and fibula
15. The most dangerous skin cancer is characterized by...
- A. ABCD
 - B. ACDE
 - C. ABCDF
 - D. ABCDE
16. A blister is a typical sign of which burn?
- A. First degree burns
 - B. Second degree burns
 - C. Third degree burns
 - D. None of the above
17. Which is the most painful burn?
- a. The third degree burn
 - b. The first degree burn
 - c. Second degree burn
 - d. Both A and B
18. The most dangerous burn is the
- A. The third degree burn
 - B. The second degree burn
 - C. The first degree burn
 - D. Both A and B
19. The least painful burn is the....
- A. Second degree burn
 - B. Third degree burns
 - C. First degree burns
 - D. None of the above
20. Which is the most abundant tissue in the human body?
- A. Nervous tissue
 - B. Epithelial tissue
 - C. Connective tissue
 - D. Osseous tissue

21. Which of the following tissues is the least generative?
- A. Connective tissue
 - B. Osseous tissue
 - C. Epithelial tissue
 - D. Nervous tissue
22. This bone is the only floating bone in the human body.
- A. The sternum
 - B. The floating ribs
 - C. The phalanges
 - D. The hyoid
23. The haversian system is...
- A. The smallest functional unit of the bone.
 - B. The nephron
 - C. The osteon
 - D. Both A and C
24. Adduction is...
- A. Movement of the lip towards away from midline.
 - B. Movement of the lip away from midline
 - C. Moment towards point of attachment.
 - D. Movement away from point of attachment.
25. Smooth muscles are found in which of the following organs?
- A. Heart
 - B. The liver
 - C. The colon
 - D. The biceps
26. The coronary suture joins which of the following bones.
- A. Frontal and parietal bones
 - B. Parietal bones
 - C. Parietal and occipital bone
 - D. Parietal and temporal bone
27. Which cell protects the body from losing too much blood?
- A. Macrophage cells
 - B. Red blood cells
 - C. Platelets
 - D. Nerve cells

28. Which is the strongest bone of the pelvic bones?

- A. Ischium
- B. Ilium
- C. Pubic
- D. Lumbar

29. Which of the following bones is used for bone marrow samples?

- A. Ilium
- B. Pubic
- C. Sternum
- D. Both A and C

30. Which of the following bones houses the brain?

- A. Thoracic cage
- B. The cranial bones
- C. Lumbar
- D. The pelvic bones

(Total marks 30)

SECTION 1 B

(Total Marks 10)

MATCHING: Choose the most appropriate response in column 2 to the statements in column1

Example 1. = D

COLUMN 1

1. The keystone bone of the face.
2. The keystone bone of the cranium
3. The fourth level of the human structural organization.
4. The largest foramina of the human body.
5. The smallest functional unit of the muscle.
6. Which cells protect us from UV light?
7. Which membrane covers the small intestines?
8. Carries the DNA of every cell
9. Biological markers for sex cells
10. Responsible for destroying bone

COLUMN 2

- A. Magnum
- B. Osteoclast
- C. Visceral peritoneum
- D. Maxillary
- E. Melanin
- F. Glycocalyx
- G. Organs
- H. Sphenoid
- I. Sarcomere
- J. Nucleus
- K. Cytoplasm
- L. Plasma membrane

SECTION 2

(SECTION 2 TOTAL 35 MARKS)

SHORT ANSWERS

Sikhumbuzo, is a 35 year's old dedicated farmer. He is a workaholic; he works on his farm six days a week and spends a minimum of five hours a day. Three weeks back he visited his doctor with a small lump on his forearm. The doctor suspected skin cancer and ordered him to do some test and the results showed that he had melanoma.

QUESTION 1

Based on information learned in your GNS 115 class, please discuss the cardinal signs of melanoma.

(10 Marks)

QUESTION 2

Discuss the structural characteristics of epithelial tissues.

(10 Marks)

QUESTION 3

With the aid of a diagram, draw and label the structural parts of a femur

(10 Marks)

QUESTION 4

State five functions of the skeletal system.

(5 Marks)