



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR
SECOND YEAR FIRST TRIMESTER**

**SCHOOL OF PURE, APPLIED AND HEALTH
SCIENCES**

DIPLOMA IN FOODS, NUTRITION AND DIETETICS

COURSE CODE: DND 2101

**COURSE TITLE: BASIC HUMAN ANATOMY AND
PHYSIOLOGY 1**

DATE: 5TH DECEMBER, 2023

TIME: 0830-1030 HRS

INSTRUCTION TO CANDIDATES

Section A: Multiple Choice Questions. Answer ALL Questions

Section B: Short Answer Questions. Answer ALL Questions

Section C: Long Answer Questions. Answer Question ONE and any other ONE question.

This paper consists of 5 printed pages. Please turn over.

SECTION A: MULTIPLE CHOICE QUESTIONS (20 MARKS). SELECT THE CORRECT ANSWER.

SECTION A: MULTIPLE CHOICE QUESTIONS (20 MARKS)

1. One of the functions of bones is to make red blood cells in a process known as?
 - A. Haemolysis
 - B. Haemopoiesis
 - C. Haematuria
 - D. Haemostasis
2. The following muscle is named after its origin and insertion points?
 - A. Tibialis anterior
 - B. Extensor digitorum longus
 - C. Rectus femoris
 - D. Sternocleidomastoid
3. _____ is the fibrous protein in our skin that protects it from abrasions?
 - A. Melanin
 - B. Keratin
 - C. Sebum
 - D. Elastin
4. One of the following is a bone that is embedded within a tendon?
 - A. Sphenoid bone
 - B. Hyoid bone
 - C. Ethmoid bone
 - D. Sesamoid bone
5. The following is a type of epithelium found lining blood vessels;
 - A. Simple squamous epithelium
 - B. Stratified squamous epithelium
 - C. Simple cuboidal epithelium
 - D. Stratified cuboidal epithelium
6. What is the other name for an immovable joint?
 - A. Amphiarthrosis
 - B. Diarthrosis
 - C. Synarthrosis
 - D. Monoarthrosis
7. The liver is a major organ of the body; which one of the following is as a results of the function of the liver?
 - A. Lipase

- B. Digestive enzymes
 - C. Insulin
 - D. Plasma proteins
8. In what form is most of the carbon dioxide transported in the blood?
- A. Oxyhaemoglobin
 - B. Oxygen
 - C. Bicarbonates
 - D. Stercobilinogen
9. Respiration is controlled by which part of the brain?
- A. Hypothalamus
 - B. Cerebrum
 - C. Medulla oblongata
 - D. Cerebellum
10. The following is a function of the chonca in the nasal cavity?
- A. Decreases the surface area
 - B. They are non functional
 - C. They secrete mucus
 - D. Increases the surface area
11. _____ are the folds found in the mucous lining of the empty stomach?
- A. Villi
 - B. Rugae
 - C. Polyps
 - D. Cells of leydig
12. Among the following which is the largest salivary gland?
- A. Parotid gland
 - B. Sublingual gland
 - C. Submandibular gland
 - D. Zygomatid gland
13. Brunner's glands are present in which part of the small intestine?
- A. Duodenum
 - B. Ileum
 - C. Jejunum
 - D. Villi
14. In human body sebaceous glands are not found in?
- A. Palms of the hands
 - B. Soles of the foot

- C. Both A and B
 - D. Neck
15. Which part of the brain is the seat of conscious activities?
- A. Limbic brain
 - B. Cerebral cortex
 - C. Brain stem
 - D. Occipital
16. The material in the brain and spinal cord which contains the axon and myelin sheathes of nerve cell is?
- A. White matter
 - B. Yellow matter
 - C. Gray matter
 - D. Red matter
17. In which of the following portion of human respiratory system is called sound box?
- A. Trachea
 - B. Nasopharynx
 - C. Epiglottis
 - D. Larynx
18. The coronary artery supply blood to the?
- A. Left side of the heart
 - B. Right atrium
 - C. Left atrium
 - D. Myocardium
19. The following is the cell responsible for secretion of the glucagon hormone?
- A. Alpha cells of islet of langerhans
 - B. Beta cells of islet of langerhans
 - C. Both alpha and langerhans
 - D. Myocytes
20. Which of the following value of PH level of stomach content will be correct?
- A. 7.35
 - B. 2.5
 - C. 5.0
 - D. 6.5

SECTION B: SHORT ANSWER QUESTIONS (40 MARKS). ANSWER ALL QUESTIONS.

1. a) Explain four types of bone cells? (4 Marks)
b) State three types of joints according to their structural classification? (3 Marks)
2. State five (5) factors responsible for venous return? (5 Marks)
3. (a) Explain two(2) sphincters that are found in the stomach? (2 Marks)
(b) Explain four (4) cells found in the gastric mucosa? (4 Marks)
4. State three (3) types of neurons? (3 Marks)
5. State five (5) functions of cardiovascular system? (5 Marks)
6. Explain four (4) accessory organs for digestive system? (4 Marks)
7. Explain three (3) types of blood circulation? (3 Marks)
8. Regarding respiratory system;
(a) State the meaning of (3 Marks)
 - i. Apnea
 - ii. Eupnea
 - iii. Hyperventilation
(b) Explain four (4) functions of respiratory system? (4 marks)

SECTION C: LONG ANSWER QUESTIONS (40 MARKS).QUESTION ONE IS COMPULSORY, THEN CHOOSE EITHER QUESTION 2 OR 3.

1. Mrs Nasieku 65 years old came to the Hospital with history of Rheumatoid arthritis that has persisted for more than six months.
 - (a) Draw and label a diagram a femur. (4 Marks)
 - (b) Explain three types of muscle? (6 Marks)
 - (c) Explain functions of musculoskeletal system? (10 Marks)

2. During clinical placement at Narok county Referral Hospital, a client present with first degree burns;
 - (a) Explain two layers of the skin? (4 Marks)
 - (b) State the cells of the epidermis? (6 Marks)
 - (c) Explain the functions of integumentary system? (10 Marks)

3. Multiple sclerosis is an autoimmune disease that affects the brain and spinal cord;
 - (a) Explain the two divisions of nervous system (4 Marks)
 - (b) Explain the three Meninges covering around the brain and spinal. (6 Marks)
 - (c) Explain the functions of nervous system? (10 Marks)

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