G C FOSTER C0LLEGE OF PHYSICAL EDUCATION AND SPORT

CERTIFICATE IN SPORTS MASSAGE THERAPY

JANUARY 2021 EXAMINATION

ANATOMY

[PCS111]

YEAR 1 **DURATION: 2 ½ HOURS**

Instruction: Answer all questions in section A, B and C and answer only ONE (1) question in section D

DO NOT TURN OVER UNTIL YOU ARE TOLD TO DO SO

SECTION A-
Multiple Choice -30 marks
Answer all questions

1. What is the importance of the cell membrane to a cell?
    a. Powering the cell
    b. Controlling movement through in and out of the cell
    c. Having a hydrophobic and hydrophilic lipid layer
    d. Protection of the cell

2. The movement of the body where one part of the body remains still and the other part makes a circle is called
    a. Circles
    b. Circumduction
    c. Abduction
    d. Rotation

3. Which of the following is not an example of a macronutrient?
    a. Fats
    b. Proteins
    c. Carbohydrates
    d. Water

4. Lysosomes attach to a vesicle in order to digest or breakdown a particle which has been packaged extracellularly and brought into the cell through a process is called;
    a. Exocytosis
    b. Receptor mediated exocytosis
    c. Pinocytosis
    d. Phagocytosis

5. The name of the organelle which contains a set of extensively folded membranous sacs in which protein synthesis occurs is;
    a. Ribosomes
    b. Mitochondria
    c. Smooth endoplasmic Reticulum
    d. Rough Endoplasmic Reticulum

6. What is the border of the uterus in the reproductive system called?
    a. Vagina
    b. Cervix
    c. Labia Majora
    d. Fallopian tubes

7. Lipids and proteins are collected, modified, packaged and distributed here
    a. Rough Endoplasmic Reticulum
    b. Smooth Endoplasmic Reticulum
    c. Vacuole
    d. Golgi Body

8. How many moveable bones are located in the spinal column of a regular adult?
    a. 24
    b. 33
    c. 34
    d. 23

9. The structure of this type of connective tissue is tissue is firm but softer than bone and contains large quantities of elastin and allows structures to return back to their shape. This type of connective tissue is called
    a. Elastic dense connective tissue
    b. Blood
    c. Fibrocartilage
    d. Elastic cartilage

10. What type of connective tissue are ligaments considered to be?
    a. Hyaline Cartilage
    b. Collagenous connective tissue
    c. Elastic connective tissue
    d. Elastic cartilage

11. Which of the following is not a part of the structure of a typical long bone?
    a. Articular Cartilage
    b. Endosteum
    c. Red bone marrow
    d. Synovial fluid

12. The connective tissue that is hard, provides support, strength and protection to the body is
    a. Cartilage
    b. Bone
    c. Blood
    d. Dense connective tissue

13. The ankle bones are called tarsal bones; what category of bones are they classified as?
    a. Long
    b. Sesamoid
    c. Irregular
    d. Short

14. In an adult female thoracic cage how many bones are there?
    a. 24
    b. 22
    c. 12
    d. 10

15. Close examination of an organ reveals a lining of several layers of cells. The surface layer of the cell is open to the internal cavity of the organ. What type of tissue is this?
    a. Epithelial Tissue
    b. Muscle Tissue
    c. Connective Tissue
    d. Nervous Tissue

16. What muscle is sometimes confused as a hamstring muscle?
    a. Adductor magnus
    b. Gracilis
    c. Popliteus
    d. Biceps Brachii

17. Delivery of oxygen from lungs to blood stream and carbon dioxide from blood stream to lungs is called?
    a. Pulmonary exchange
    b. Oxygen transfer
    c. Gas exchange
    d. Breathing

18. Oxygenated blood is carried to the heart by which of the following structures?
    a. Aorta
    b. Carotid arteries
    c. Pulmonary veins
    d. Superior vena cava

19. Which of the following allows gas exchange in the lungs?
    a. Alveoli
    b. Bronchi
    c. Bronchioles
    d. Capillaries

20. The major function of the hamstring is to?
    a. Flex
    b. Extend
    c. Rotate
    d. Pronate

21. Which muscle in the body is responsible for 75% of the air inhaled?
    a. The lungs
    b. Intercostal Muscles
    c. Diaphragm
    d. Sternohyoid

22. Where is the largest organ of the body found?
    a. The Heart
    b. The Brain
    c. The Skin
    d. The Stomach

23. Which system has major differences between male and female?
    a. Reproductive system
    b. Skeletal System
    c. Endocrine system
    d. Muscular system

24. From the anatomical position, which muscle is seen to be the antagonist muscle in the flexing of the elbow joint?
    a. Biceps
    b. Deltoid
    c. Triceps
    d. Trapezius

25. Peristalsis does not occur in which part of the Digestive system?
    a. Mouth
    b. Esophagus
    c. Stomach
    d. Small intestine

26. When an athlete tips on his or her toes, which two muscles is seen as the primary muscles?
    a. Gastrocnemius & soleus
    b. Rectus femoris & Vastus Lateralis
    c. Tibialis Anterior & Fibularis Longus
    d. Bicep Femoris & Semitendinosus

27. Food moves through the digestive tract through?
    a. Smooth muscle
    b. Peristalsis
    c. Pushing
    d. Swallowing

28. The muscle tissue that lines the inside of hallow organs is referred to as
    a. Smooth muscle
    b. Skeletal muscle
    c. Cardiac Muscle
    d. Hallow muscle

29. While throwing a ball the shoulder joint is used mainly to perform the action. What is the name of this synovial joint?
    a. Ball-and-socket
    b. Hinge joint
    c. Pivot Joint
    d. Planar Joint

30. Bone to bone is connected by which connective tissue?
    a. Tendon
    b. Ligaments
    c. Muscle
    d. Skin

SECTION B
Short Answer
20 marks
Answer ALL questions

1. Explain the difference between the origin and insertion (2 marks)
2. In which system is the cilia located? Discuss why it is essential to our bodies.

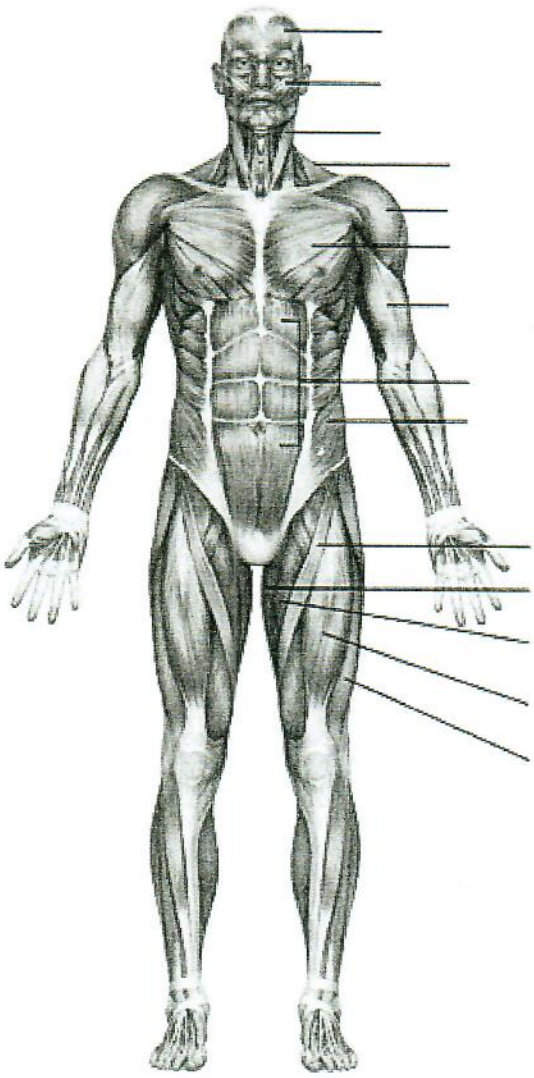
   (2 marks)
3. The nervous system has 2 essential parts. What are they? Discuss the structures located within it. (2 marks)
4. The anatomical position is known to be universal, briefly describe this position.

   (2 marks)
5. State the bones that make up the elbow joint. (2 marks)
6. What is a proximal Position in anatomy? (2 marks)
7. Where is the epiglottis located? Which two systems share it? (2 marks)
8. When naming muscles the word bicep refers to? (2 marks)
9. Compare and contrast between ventral and dorsal. (2 marks)
10. State the bones that support the teeth. (2 marks)

SECTION C
LABELING
30 MARKS
ANSWER ALL QUESTIONS

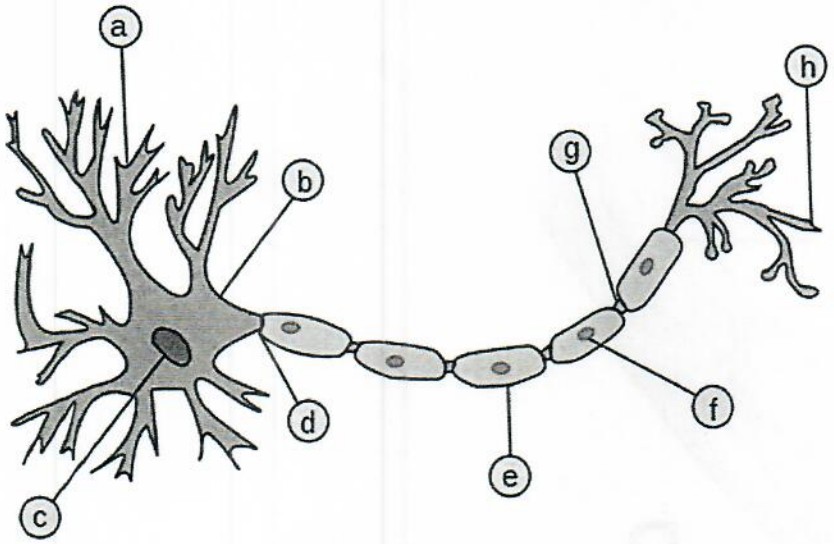
On this page is an unlabeled diagram of some of the major skeletal muscles of a human. From the names given below accurately label ten (10) of these muscles.

(10marks)



(Latissimus Dorsi, Rectus abdominus, Rectus femoris, Gracilis, Biceps brachii, Pectoralis major, Deltoid, External Oblique, Sartorius, Vastus Lateralis, Adductor longus, Frontalis, Trapezius, Zygomaticus, Sternocleidomastoid).

On this page is an unlabeled diagram of a typical Neuron. From the list given below accurately label five (5) of its unlabeled areas. (5 marks)



(Schwann cell, Terminal, Nucleus, Myelin sheath, Dendrite, Node of Ranvier, Cell body, Axon)

a._____

b._____

c._____

d._____

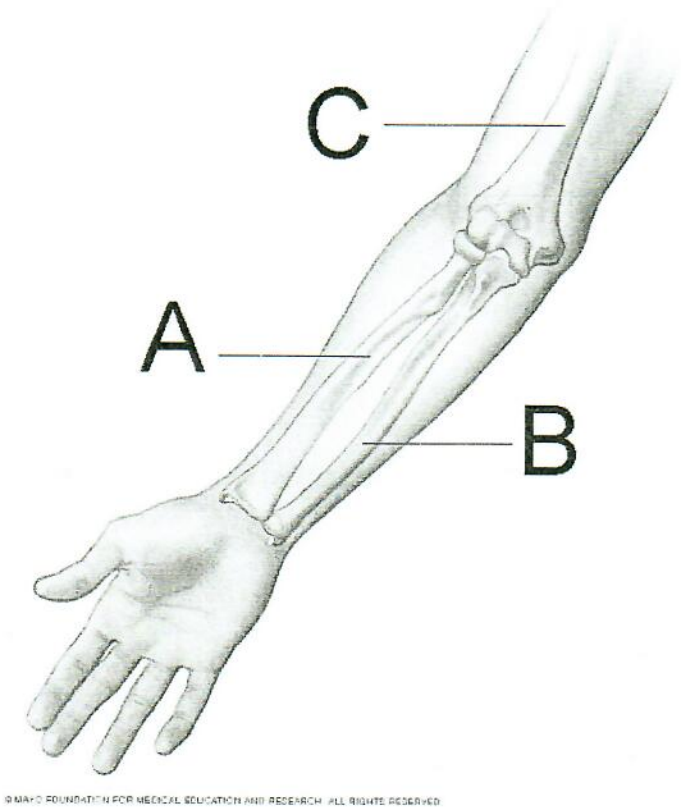
e._____

f._____

g._____

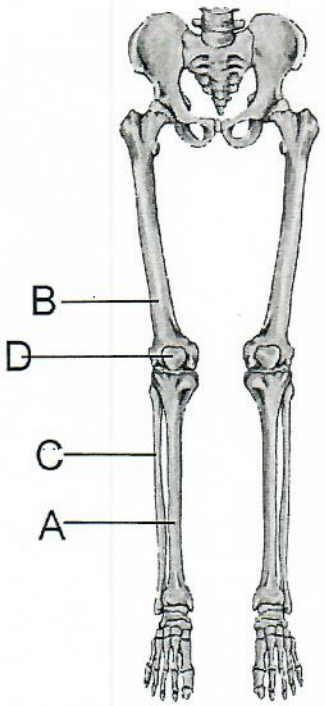
h._____

On this page is an unlabeled diagram of a Skeletal Structures. From the list given below accurately label all of its unlabeled areas. (8 marks)



Word bank

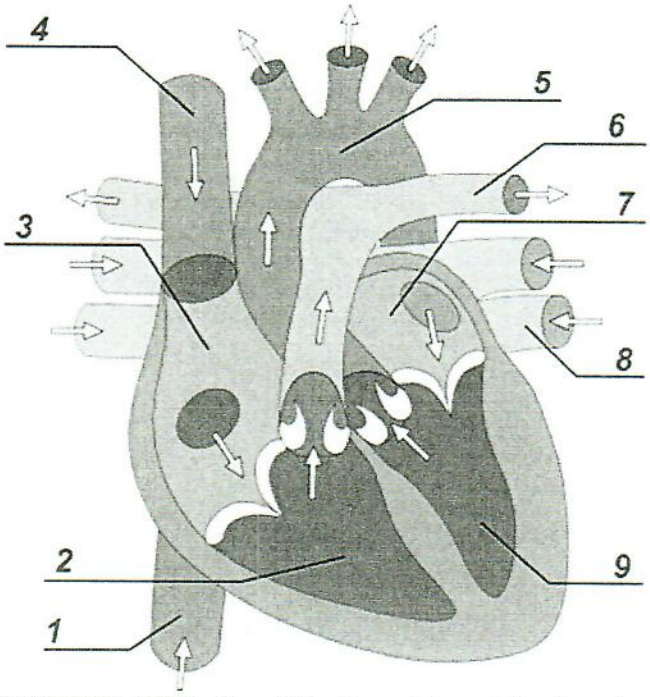
navicular
femur
patella
calcaneus
humerus
radial
radius
ulna



Word bank

patella
ischium
pubis
tibia
tibial tuberosity
fibula
greater trochanter
femur

On this page is an unlabeled diagram of a typical Heart. From the list given below accurately label seven (7) of its unlabeled areas. (7 marks)



WORD BANK- Carotid artery, tricuspid valve, jugular vein, left ventricle, left atrium, right ventricle, right atrium, aorta, pulmonary artery, pulmonary vein, superior vena cava, inferior vena cava, femoral artery, blood vessels

SECTION D
Essay
Answer ONE question
10 Marks

Students are to select one (1) of the three (3) questions and answer in their own words.

1. What is the purpose of the of the valves in the heart? Analyze and Describe what would occur to the body and the structure of the heart without the valves.

2. Articular Cartilage is an important part of the skeletal system. Analyze this statement "Loss of articular cartilage will result in better stabilization at joints." Explain the purpose of the articular cartilage, identify if the statement is true or false and explain your reasoning as to why or why not.

3. Explain the correlation between the blood and cardiovascular system, respiratory system, and the nervous system and how the structures of these help facilitate muscles and their movements.

END OF EXAMINATION