

# ANATOMY AND PHYSIOLOGY CPE 1

1. The following connects muscle to bone
  - A. Ligaments
  - B. Tendons
  - C. Cartilage
  - D. Tissue
2. The number of bones found on the hand and wrist is
  - A. 20
  - B. 26
  - C. 27
  - D. 18
3. The longest bone in the body is
  - A. The spine
  - B. Femur
  - C. Humerus
  - D. Tibia
4. Among the following bones, one is not connected to another
  - A. Skull
  - B. Cuboid
  - C. Hyoid
  - D. Clavicle
5. The largest organ in the body is
  - A. Large intestine
  - B. Skin
  - C. Liver
  - D. Heart
6. Red blood cells in fetus are formed in the
  - A. Bone marrow
  - B. Liver
  - C. Kidneys
  - D. Thymus
7. Calcium is a major component of
  - A. Ligaments
  - B. Bones
  - C. Muscles
  - D. Skin
8. The following best describes the primary curvature of the spine
  - A. Sacral and thoracic curvatures
  - B. Lumbar and sacral curvatures
  - C. Cervical and lumbar

- D. Only the thoracic curvature
- 9. The study of bones is called
  - A. Anatomy
  - B. Osteology
  - C. Myology
  - D. Physiology
- 10. The smallest bone in the human body is
  - A. The stapes
  - B. The phalange
  - C. Nasal bone
  - D. Carpals
- 11. The following joints are highly moveable
  - A. Cartilaginous joint
  - B. Synovial joints
  - C. Fibrous joints
  - D. Ligamentous joints
- 12. The following artery forms part of the circulusarteriosus
  - A. The facial artery
  - B. The temporalis artery
  - C. The cerebral artery
  - D. The vertebral artery
- 13. The suffix '-logist' (as an oncologist) mean
  - A. Someone who studies a certain fields
  - B. Act of cutting, incision
  - C. A field in medicine
  - D. A process
- 14. The following measurement is not typically taken by a spirometer
  - A. Residual volume
  - B. Oxygen saturation
  - C. Forced expiratory flow
  - D. Total lung capacity
- 15. The prefix 'macro-' (as in macrophage) mean
  - A. Small/smallest
  - B. Thousandth
  - C. Large
  - D. Wide
- 16. The following prefix means 'dead'
  - A. Pneumo-
  - B. Necro-
  - C. Neuro-

- D. Nano-
17. Riboflavin is another name for
- A. Thrombocytes
  - B. Vitamin C
  - C. Vitamin B2
  - D. Red bone marrow
18. The following is an example of water soluble vitamin
- A. Vitamin A
  - B. Vitamin K
  - C. Vitamin E
  - D. Vitamin B1
19. Calculate the body mass index if Mr. Oloo weighs 90 Kgs and height is 200centimeters
- A. 0.2
  - B. 2
  - C. 40.5
  - D. 22.5
20. Chemical processes that take place in the organelles and cytoplasm of body cells is
- A. Metabolism
  - B. Cellular respiration
  - C. Homeostasis
  - D. Physiology
21. Which major organ lies deep to the right hypochondriac region
- A. stomach
  - B. spleen
  - C. liver
  - D. duodenum
22. Which plane of the body divides it into right and left regions?
- A. Transverse
  - B. Axial
  - C. Coronal
  - D. Sagittal
23. Define physiology
- A. The microscopic study of tissues and cells
  - B. The study of how the body works.
  - C. All the chemical processes that take place in the organelles of the body's cells
  - D. The body's automatic tendency to maintain a relatively constant internal environment
24. Which of the following best describes the "anatomical position"?
- A. Standing vertically, arms held horizontally, legs apart so that the tips of the head, hands and feet lie on an imaginary circle, drawn around the body.

- B. Standing “to attention”, with hands held so that thumbs are ventral while the fifth digit is dorsal.
  - C. Standing “at ease” with hands clasped behind your back while adjacent and dorsal to the sacrum.
  - D. Standing vertically, arms parallel and lateral to the ribs with hands inferior to the elbows and supinated
25. Identify the list that contains the four types of tissue
- A. Extracellular fluid, skeletal tissue, glandular tissue, connective tissue.
  - B. Extracellular fluid, muscle tissue, glandular tissue, cartilaginous tissue.
  - C. Neural tissue, skeletal tissue, epithelial tissue, cartilaginous tissue.
  - D. Neural tissue, muscle tissue, epithelial tissue, connective tissue
26. Identify the cation found in the intracellular fluid in abundance
- A. chlorine
  - B. potassium
  - C. calcium
  - D. sodium
27. The name of the process of division of a somatic cell’s nucleus into two daughter nuclei is
- A. prophase
  - B. cytokinesis
  - C. mitosis
  - D. meiosis
28. The blood group known as the ABO system is based on the presence of what proteins on blood cells?
- A. Antibodies
  - B. Antigens
  - C. Agglutinins
  - D. Immunoglobulins
29. The following is the basic contractile unit of muscle fibre
- A. A Tendon
  - B. A Fasciculus
  - C. A Sarcomere
  - D. An Internal Intercostal
30. Skeletal muscle cells have all of the following characteristics EXCEPT one. Which one?
- A. A neuromuscular junction crossed by ach (acetyl choline)
  - B. Invaginations of sarcolemma called “t tubules”.
  - C. They are non nucleated
  - D. They are striated
31. The following is an example of naturally acquired active immunity: -
- A. Antibodies pass from mother to the developing child in the womb
  - B. A child receives the measles, mumps and rubella vaccine
  - C. A child bitten by a rabid animal receives an injection of rabies antibodies

- D. An adult contract a streptococcus infection and recovers in a couple of weeks
32. The majority of lymph fluid in the body returns to the venous circulation via the
- A. Thoracic duct
  - B. Right lymphatic duct
  - C. Cisterna chili
  - D. Intestinal tract
33. One purpose of lymph nodes is to
- A. Trap antibodies
  - B. Trap macrophages
  - C. Trap antigens
  - D. Trap hormone
34. The predominant ion in extracellular fluid is
- A. Sodium
  - B. Potassium
  - C. Calcium
  - D. phosphate
35. Parietal cells produce
- A. Pepsinogen
  - B. Mucus
  - C. Lymph
  - D. Hydrochloric acid
36. The surgical removal of the stomach will cause deficiency in
- A. Vitamin B12
  - B. Folic acid
  - C. Vitamin B6
  - D. Vitamin K
37. The following is synthesized by the skin
- A. Vitamin A
  - B. Vitamin B
  - C. Vitamin C
  - D. Vitamin D
38. The following is an accessory structure of the integumentary system
- A. Pacinian corpuscle
  - B. Hypodermis
  - C. Sebaceous gland
  - D. Stratum lucidum
39. The top most layer of the skin is
- A. Stratum granulosum
  - B. Stratum lucidum
  - C. Stratum corneum
  - D. Stratum germinativum
40. Indicate whether true or false
- I. The inner layer that surrounds the lung itself is called the visceral pleura

- II. The bicuspid valve is located on the left side of the heart

**SHORTANSWERS QUESTIONS**

**(40 MARKS)**

1. Describe the conducting system of the heart (6 marks)
2. State four (4) factors influencing the respiratory rate (4 marks)
3. Explain four (4) functions of the skin (8 marks)
4. State three (3) functions of water in the body (3 marks)
5. Explain four (4) activities involved in digestion (8 marks)
6. State the function of four (4) hormones secreted by of the anterior pituitary gland (4 marks)
7. Draw the circle of Willis and name it accordingly (7 marks)

**LONG ANSWERS QUESTIONS**

**(20 MARKS)**

Mr. Okra has come to the ward complaining of pain during urination.

- I. Draw the nephron and label it appropriately (5 marks)
- II. Explain the Renin, Angiotensin, Aldosterone system (7 marks)
- III. Discuss the functions of the kidney (8 marks)