



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

MEDICAL LABORATORY

AMD 2110 : HUMAN ANATOMY AND PHYSIOLOGY I

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2016

TIME: 2 HOURS

DATE: Pick Date Dec 2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **TWO** Section(s). Attempt ALL questions.

Circle the correct answer in section A.

SECTION A (40 marks)

1. The study of structure that can be observed with the naked eye is called

- a. gross anatomy.
- b. ultrastructure.
- c. microscopic anatomy.
- d. cytology.

2. The simplest structures considered to be alive are

- a. organisms.
- c. tissues.
- d. cells.
- d. organelles.

3.. The external genitalia is composed of all the following except,

- a) Labia majora
- b) Hymen
- c) Clitoris
- d) Vagina

4. Transitional epithelium is found in

- a. the urinary system.
- b. the respiratory system.
- c. the digestive system.
- d. all of the above.

5. Tendons are composed of _____ connective tissue.

- a. skeletal
- b. dense irregular
- c. yellow elastic
- d. dense regular

6 Which hormone is tested for during a pregnancy test?

- a) Leutenising hormone
- b) Progesterone
- c) Estrogen
- d) Human chorionic gonadotropin(hCG)

7. Osteocytes are supplied with nutrition through thein the osteons.

- a. Lacunae
- b. Canaliculi
- c. Osteon
- d. lamellae

8. Muscle cells and axons are often called _____ because of their shape.

- a. cells
- b. fibres
- c. connective tissue
- d. neurones

9. The only type of muscle that lacks gap junctions is _____.

- a. skletal muscle
- b. cardiac
- c. smooth
- d. all of the above

10. Any epithelium in which every cell touches the basement membrane is called a/an _____ epithelium.

- a. Glandular
- b. Simple
- c. Stratified
- d. Acinar

11. Which of the following is the most complex level of organization?

- A. organ system
- B. organelles
- C. tissue
- D. cells

12. Epithelial tissue is characterized by each of these traits, except that _____.

- a. it lacks blood vessels
- b. it functions in secretion, absorption, and excretion
- c. epithelial cells are loosely packed and have much intercellular material
- d. it is anchored to a basement membrane

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14. Epithelium that appears layered due to the varying levels at which nuclei are found in cells, but in reality is not layered, is _____.

- a. transitional epithelium
- b. pseudostratified columnar epithelium
- c. stratified squamous epithelium
- d. stratified columnar epithelium

15. The primary purpose of stratification, or layering, in epithelial tissue is for increased _____.

- a. Protection
- b. Secretion
- c. Absorption
- d. thickening of the basement membrane

16. What type of epithelium lines the urinary bladder and is capable of distention?

- a. stratified cuboidal epithelium
- b. stratified squamous epithelium
- c. transitional epithelium
- d. stratified columnar epithelium

17. An exocrine gland that loses small parts of its cell bodies during secretion, as is the case for the mammary gland, is further classified as a(n) _____ gland.

- a. Merocrine

- b. Apocrine
- c. Holocrine
- d. Endocrine

18. Connective tissues are somewhat similar to epithelial tissues in all of these characteristics except _____.

- a. they have abundant intercellular material
- b. they can usually reproduce themselves
- c. they often serve more than one function
- d. they occur throughout the body

19. What function do fibroblasts serve in connective tissue?

- a. carry on phagocytosis
- b. secrete heparin that prevents blood clotting
- c. secrete proteins that become fibers in the connective tissue matrix
- d. release histamine associated with allergies and inflammation

20. Connective tissue fibers that have great tensile strength and can be found in ligaments and tendons are _____.

- a. elastic fibers
- b. collagenous fibers
- c. reticular fibers
- d. yellow fibers

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21. The gall bladder

- a) Release cholecystokinin
- b) Stores bile
- c) Is located above the liver
- d) Is part of the gastro intestinal tract

22. Choosing from the following list of connective tissues, which one consists of cells in a fluid matrix?

- a. loose connective tissue
- b. adipose tissue
- c. bone
- d. blood

23. Select the correct statement about bone.

- a. Bone stores, but does not release, inorganic salts.
- b. Bone cells (osteocytes) are dead in mature bone.
- c. Bone is a very metabolically active tissue
- d. Elderly people cannot rebuild bone

24. Which muscle tissue is multinucleate, voluntary, and bears striations?

- a. skeletal muscle
- b. smooth muscle
- c. multiunit smooth muscle
- d. cardiac muscle

25. Neuroglial cells help neurons in each of these ways, with the exception of _____.

- a. supporting and binding nervous tissue
- b. carrying on phagocytosis
- c. playing a role in cell-to-cell communications
- d. transmitting nervous impulses

26. Which of the following is not one of the four major tissues?

- a. Epithelial
- b. Connective
- c. Nervous
- d. skeletal muscle

27. The only tissue specialized for movement is the ____ tissue.

- a. Nervous
- b. cardiac muscle
- c. muscle
- d. connective

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28. The cells lining blood vessels and the lung alveoli are classed as ____ epithelium.

- a. Columnar
- b. stratified squamous
- c. squamous
- d. cuboidal

29. The kidney tubules are lined with ____ epithelial cells.

- a. Columnar
- b. Cuboidal
- c. Squamous
- d. Ciliated

30. The cells that directly and specifically secrete mucus are called ____ cells.

- a. Epithelial
- b. Endocrine
- c. Exocrine
- d. Goblet

31. The term ____ refers to the fact that a tissue has only many layer of cells.

- a. Stratified

- b. Cuboidal
- c. Simple
- d. Pseudostratified

32. Connective tissue is complex because it has a variety of cells and a noncellular background called a ___ surrounding them.

- a. Collagen
- b. Elastin
- c. mucous secretion
- d. matrix

33. Cartilage is slow healing because

- a. it is avascular
- b. it has a semisolid matrix
- c. it is located in areas of constant physical strain
- d. it has chondrocytes and chondroblasts

34. Which region of the body has voluntary muscles

- a. Heart muscle
- b. bladder muscle
- c. skeletal muscle
- d. intestines muscle

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35. The following refer to planes of reference in the body except

- a. Horizontal
- b. Coronal
- c. Palmar
- d. Sagittal

36. The following are nuclear organelles except

- a. Nucleolus
- b. Karyosome
- c. Chromatin meshwork
- d. Ground cytoplasm

37. The following are parts of the respiratory cycle except

- a. Pause
- b. Expiration
- c. Inspiration
- d. Compliance

38. The layers of the uterus include the following except

- a. Round ligament
- b. Myometrium
- c. Perimetrium
- d. Endometrium

39. Body cavities include the following except

- a. Cranial
- b. Thoracic
- c. Pelvic
- d. Caecum

40. Granulocytes include all the following except

- a. Thrombocyte
- b. Basophil
- c. Eosinophil
- d. Neutrophil

SECTION B (60 marks)

41. .With a proper diagram explain the lung volumes and capacities(20 marks)

42. Illustrate the following exocrine glands as classified according to structure and function (20 marks)

43. . a. Outline the digestive system showing all organs involved in digestion (10 marks)

b. Illustrate the osteon (10 marks)