



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 terminal (end) portion of the small intestine is the:

- A. ileum
- B. cecum
- C. duodenum
- D. jejunum.

2. Which of the following organs is not considered part of the digestive system?

- A. pancreas
- B. spleen
- C. tongue
- D. gallbladder.

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 and chondrocytes occupy little cavities called _____.

a. Lacunae

b. Canaliculi

c. Osteon

d. lamellae

8. The functional unit of the urinary system is the:

A.calyx

B.nephron

C.glomerulus

D.urinary bladder

9. Which of the following lists the layers of the digestive tract in the correct order, from the interior outward?

A.serosa, mucularis externa, submucosa, mucosa

B.serosa, mucularis externa, mucosa, submucosa

C.mucosa, submucosa, mucularis externa, serosa

D.submucosa, mucosa, mucularis externa, serosa

10. The only type of muscle that lacks gap junctions is ____.
- skeletal muscle
 - cardiac
 - smooth
 - all of the above
11. Any epithelium in which every cell touches the basement membrane is called a/an ____ epithelium.
- Glandular
 - Simple
 - Stratified
 - Acinar
12. Which of the following is the most complex level of organization?
- organ system
 - organelles
 - tissue
 - cells
13. Epithelial tissue is characterized by each of these traits, except that _____.
- it lacks blood vessels
 - it functions in secretion, absorption, and excretion
 - epithelial cells are loosely packed and have much intercellular material
 - it is anchored to a basement membrane
14. Epithelium that appears layered due to the varying levels at which nuclei are found in cells, but in reality is not layered, is _____.
- transitional epithelium
 - pseudostratified columnar epithelium
 - stratified squamous epithelium
 - stratified columnar epithelium
15. The primary purpose of stratification, or layering, in epithelial tissue is for increased _____.
- Protection
 - Secretion
 - Absorption
 - thickening of the basement membrane

16. What type of epithelium lines the urinary bladder and is capable of distention?
- stratified cuboidal epithelium
 - stratified squamous epithelium
 - transitional epithelium
 - 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.
- Merocrine
 - Apocrine
 - Holocrine
 - Endocrine
18. Connective tissues are somewhat similar to epithelial tissues in all of these characteristics except _____.
- they have abundant intercellular material
 - they can usually reproduce themselves
 - they often serve more than one function
 - they occur throughout the body
19. What function do fibroblasts serve in connective tissue?
- carry on phagocytosis
 - secrete heparin that prevents blood clotting
 - secrete proteins that become fibers in the connective tissue matrix
 - 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 _____.
- elastic fibers
 - collagenous fibers
 - reticular fibers
 - yellow fibers
21. The gall bladder
- Release cholecystokinin
 - Stores bile
 - Is located above the liver
 - 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. Which of the following are functions of the digestive system?

- a. ingestion, mechanical processing, digestion
- B. secretion, absorption, compaction
- C. excretion, defense of surrounding tissues
- D. all of the above

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

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

30. The kidney tubules are lined with ____ epithelial cells.
- Columnar
 - Cuboidal
 - Squamous
 - Ciliated
31. The cells that directly and specifically secrete mucus are called ____ cells.
- Epithelial
 - Endocrine
 - Exocrine
 - Goblet
32. The term ____ refers to the fact that a tissue has only many layer of cells.
- Stratified
 - Cuboidal
 - Simple
 - Pseudostratified
33. Synthesis and secretion of bile is a major digestive function of the:
- gallbladder
 - liver
 - pancreas
 - small intestine
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 - liver
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 - small intestine
35. Cartilage is slow healing because
- it is avascular
 - it has a semisolid matrix
 - it is located in areas of constant physical strain
 - it has chondrocytes and chondroblasts
36. Which region of the body has voluntary muscles
- Heart muscle
 - bladder muscle
 - skeletal muscle
 - intestines muscle

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

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

38. The following are nuclear organelles except

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

39. The following are parts of the respiratory cycle except

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

40. The two anatomical divisions of the nervous system are:

- A.somatic and peripheral
- B.peripheral and autonomic
- C.central and peripheral
- D.central and autonomic

SECTION B (60 marks)

41. Describe the muscle contraction using appropriate illustration(20mks).

42. Give the roles of the pituitary hormones(20 mks)

43. a. Illustrate the kidney and the nephron (10 mks)

b. Explain the process of urine formation and excretion (10 marks)