



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL SCIENCES

UNIVERSITY EXAMINATION FOR:

BACHELOR IN LABORATORY SCIENCES

AMD 4103 : HUMAN ANATOMY I

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 2 HOURS

DATE: Pick Date May 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(30 MARKS)

1. The clavicle (collarbone) is to the nipple of the breast.

- A. anterior
- B. superficial
- C. ventral
- D. distal
- E. superior

2. Given these organ and cavity combinations:

- i. heart and pericardial cavity
- ii. lungs and pleural cavity
- iii. stomach and peritoneal cavity
- iv. kidney and peritoneal cavity

Which of the organs is correctly paired with a space that surrounds that organ?

- A. 1,2
- B. 1,2,3

- C. 1,2,4
- D. 2,3,4
- E. 1,2,3,4

3. A patient with appendicitis usually has pain in the.....quadrant of the abdomen.
- A. left-lower
 - B. right-lower
 - C. left-upper
 - D. right-upper
 - E. mediastinal

4. Which of the following bones is found in the shoulder girdle?
- A. sternum
 - B. humerus
 - C. scapula
 - D. ulna
 - E. atlas

5. The following are conceptual levels for considering the body.
1. Cell , 2. Chemical, 3. Organ , 4. Organ system, 5. Organism, 6. Tissue
Choose the correct order for these conceptual levels, from smallest to largest.

- A. 1, 2, 3,6,4,5
- B. 3, 1, 6,4,5,2
- C. 1, 6, 5,3,4,2
- D. 2, 1, 6,3,4,5
- E. 4, 6, 1,3,5,2

6. The prime function of osteoclasts is to
- A. prevent osteoblasts from forming.
 - B. become osteocytes.
 - C. break down bone.
 - D. secrete calcium salts and collagen fibers.
 - E. form the periosteum.

7. Epithelium composed of two or more layers of cells with only the smooth muscles that produce “goose bumps” when they contract and are attached to hair follicles are called.....

- A. external root sheaths.
- B. internal root sheaths.
- C. errector pili.
- D. hair bulbs.
- E. dermal papillae.

8. Which kind of epithelium has its deepest layer in contact with the basement membrane?
- A. stratified epithelium.

- B. columnar epithelium.
- C. simple epithelium.
- D. cuboidal epithelium.
- E. pseudostratified epithelium.

9. Which of these is not true of adipose tissue?

- A. It is the site of energy storage.
- B. It is a type of connective tissue.
- C. It acts as a protective cushion.
- D. Brown adipose is found only in babies.
- E. It functions as a heat insulator.

10. Glands that accumulate secretions and release them only when the individual secretory cells go with the secretion are called.....glands.

- A. apocrine
- B. holocrine
- C. tubulo-acinar
- D. merocrine
- E. saccular

11. Extremely delicate fibers that make up the framework for organs such as the liver, spleen, and lymph nodes are.....

- A. elastic fibers
- B. cilia.
- C. reticular fibers.
- D. collagen fibers.
- E. microvilli.

12. In which of these locations are dense irregular elastic connective tissue found?

- A. large arteries
- B. nuchal ligament
- C. adipose tissue
- D. dermis of the skin
- E. Ligaments

13. A layer of skin (where mitosis occurs) that replaces cells lost from the outer layer of the epidermis is the.....

- A. Stratum corneum.
- B. Reticular layer.
- C. Stratum basale.
- D. Hypodermis.
- E. Stratum lucidum.

14. In third-degree (full-thickness) burns, both the epidermis and dermis of the skin are destroyed. Which of the following conditions does not occur as a result of a third-degree burn?

- A. dehydration (increased water loss)
- B. increased likelihood of infection
- C. increased sweating
- D. loss of sensation in the burned area
- E. poor temperature regulation in the burned area

15. Which of these substances makes up the major portion of bone?

- A. collagen
- B. osteocytes
- C. osteoblasts
- D. hydroxyapatite
- E. proteoglycan aggregates

16. Osteochondral progenitor cells

- A. can become osteoblasts or chondroblasts.
- B. are derived from mesenchymal stem cells.
- C. are located in the perichondrium, periosteum, and endosteum.
- D. do not produce osteoclasts.
- E. all of the above.

17. The type of lamellae found in osteons is -----lamellae.

- A. circumferential
- B. concentric
- C. interstitial
- D. circumventing
- E. circular

18. The mandible articulates with the skull at the

- A. styloid process.
- B. mandibular fossa.
- C. medial pterygoid.
- D. occipital condyle.
- E. zygomatic arch.

19. Of the 11 organ systems, the only one that can be observed from the surface of the body is the.....system

- A. lymphatic
- B. muscular
- C. integumentary
- D. endocrine
- E. cardiovascular

20. A meniscus is found in the.....

- A. shoulder joint
- B. hip joint.
- C. ankle joint.
- D. elbow joint.
- E. knee joint.

21. Which of the following is true of Mesenchymal cells?

- A. form embryonic connective tissue.
- B. give rise to all adult connective tissues.
- C. in adults produce new connective tissue cells in response to injury.
- D. Forms the germinal layers
- E. all of the above.

22. A gland has a duct that branches repeatedly, and the ducts end in sac-like structures is called

- A. simple tubular
- B. simple acinar
- C. compound tubular
- D. compound acinar
- E. simple coiled tubular

23. Which of the following refers to the smooth rounded projection of a bone that forms part of a joint?

- A. Tubercle
- B. Septum
- C. Condyle
- D. Meatus
- E. Bony sinus

24. Which of the following is not part of the axial skeleton?

- A. Clavicle
- B. Sternum
- C. Ribs
- D. Cranium
- E. Atlas

25. Which of the following is not an epidermal layer?

- A. Papillary layer
- B. stratum corneum,
- C. lucidum,
- D. granulosum,
- E. spinosum

26. Theand..... are sometimes together called the lepto-meninges.

- A. Arachnoid, dura
- B. Dura , pia
- C. Dura, periosteum
- D. Pia mater, arachnoid
- E. None of the above

27. Which of the following is not a cranial bone?

- A. Temporal
- B. Occipital
- C. Lacrimal
- D. Frontal
- E. Parietal

28. Which of the following features is characteristic of the male pelvic bone

- A. Heavier
- B. Wider
- C. Shallower
- D. Lighter
- E. rounder

29. Which of the following is not part of the arm?

- A. Manus
- B. Brachium
- C. Antebrachium
- D. Carpus
- E. Pes

30. Which are the most abundant formed elements of blood?

- A. Leucocytes
- B. red blood cells
- C. platelets
- D. chondrocytes
- E. fibrin

SECTION B (40 MARKS)

31. With clear illustration describe any five types of synovial joints giving relevant examples (20mks)
32. a) Using Illustration show the classification of the membranous epithelium and give the tissues where they are located (10 marks)
- 32 b) Describe using illustrations the different structural types of neurones (10marks)