ANP 1106 Midterm 1
January 29th, 2020
Dr. Carnegie

HIGHLIGHTED ANSWERS ARE CORRECT

# University of Ottawa
# ANP 1106A; Midterm #1

Date: January 29, 2020
Time: 11:30 h
Duration: 1 hr 20 min

Instructor:
Dr. J. Carnegie

**INSTRUCTIONS:**

1. *48 MCQs (1 mark/1 correct answer per question) plus 16 marks for fill-in-the-blank questions and diagram labeling.*
2. *Please use the computer sheet for the multiple choice questions, but answer the remaining questions right on the exam itself.*
3. *Please put your name & student number on this page and on your computer sheet and on the top of pages 7 and 9. Hand in pages 7-10 when you have finished. You may keep pages 1-6; correct answers for the MCQs will be posted.*
4. *Make sure this exam is complete. This exam contains **10** pages. The excuse of missing a page will not be accepted after the examination.*

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1. **Which of the following is *not* a part of the synovial joint?**
   A. joint cavity
   B. tendon sheath
   C. articular cartilage
   D. articular capsule

2. **The plane that runs at right angles to the sagittal plane, dividing the body into anterior and posterior regions is a:**
   A. midsagittal plane
   B. transverse plane
   C. frontal plane
   D. parasagittal plane

3. **What structure separates the abdominopelvic and thoracic cavities?**
   A. The pericardial cavity
   B. The diaphragm
   C. The mediastinum
   D. There is no separation between these cavities

4. **The head lies ..... to the heart and the elbow is ..... to the wrist.**
   A. superior, medial
   B. frontal, anterior
   C. superior, proximal
   D. inferior, distal
   E. inferior, medial

5. **Which body cavity contains the pleural and pericardial cavities?**
   A. abdominal
   B. pelvic
   C. dorsal
   D. thoracic

6. **What is the first threat to life from a massive third-degree burn?**
   A. infection
   B. catastrophic fluid loss
   C. unbearable pain
   D. loss of immune function

7. **Sudoriferous (sweat) glands are categorized as two distinct types. Which of the following are the two types of sweat glands?**
   A. sebaceous and merocrine
   B. mammary and ceruminous
   C. merocrine and apocrine
   D. holocrine and mammary

8. **Which layer of the dermis comprises ~80% of the dermis and is responsible for the tension lines in the skin?**
   A. reticular layer
   B. subcutaneous layer
   C. hypodermal layer
   D. papillary layer
   E. none of the above

9. **Apocrine glands, which begin to function at puberty under hormonal influence, seem to play little role in thermoregulation. Where would we find these glands in the human body?**
   A. in all body regions and buried deep in the dermis
   B. beneath the flexure lines in the body
   C. in the axillary and anogenital area
   D. in the palms of the hands and soles of the feet

10. **A needle giving an injection would pierce the epidermal layers of the forearm in which order?**
    A. basale, spinosum, granulosum, corneum
    B. lucidum, corneum, spinosum, granulosum, basale
    C. granulosum, basale, spinosum, corneum
    D. corneum, granulosum, spinosum, basale

11. **Despite its apparent durability, the dermis is subject to tearing. How might a person know that the dermis has been stretched to the point of being torn?**
    A. Because the pain is acute, due to the large number of tactile cells.
    B. By the appearance of striae that are visible on the surface of the skin.
    C. Blisters appear on the surface to the skin.
    D. The stretching causes the tension lines to disappear.

12. **Which of the following statements about the function of skin is NOT true?**
    A. It helps regulate body temperature.
    B. It protects against bacterial invasion and dehydration.
    C. It absorbs water and salts.
    D. It participates in the synthesis of vitamin D.
    E. It detects stimuli related to temperature and pain.

13. **The layer of skin from which new epidermal skins are derived is the stratum:**
    A. corneum
    B. basale
    C. lucidum
    D. granulosum
    E. spinosum

14. **The skin product that prevents excessive evaporation of water from the skin, keeps the skin soft, and inhibits the growth of bacteria is:**
    A. sebum
    B. keratin
    C. cerumen
    D. sweat
    E. carotene

15. **The subcutaneous layer (hypodermis) consists mostly of:**
    A. melanin
    B. simple squamous epithelial tissue
    C. keratin
    D. areolar and adipose tissue
    E. smooth muscle

16. **The bone in which the foramen magnum is found is the:**
    A. atlas
    B. axis
    C. occipital
    D. parietal

17. **Which of the following statements is TRUE?**
    A. The most common site of fracture in the humerus is the anatomical neck.
    B. The carpus is composed of 7 bones.
    C. The tubercle of a rib articulates with the transverse process of the same-numbered thoracic vertebra.
    D. The largest and strongest bone of the face is the maxilla.
    E. The layman's name for the scapula is the collarbone.

18. **Each of the following bones contributes to the formation of the orbit EXCEPT the:**
    A. lacrimal bone
    B. nasal bone
    C. frontal bone
    D. sphenoid bone
    E. palatine bone

19. **Which of the following statements about the lower limb is FALSE?**
    A. The bones of the foot are divided into groups called tarsal bones, metatarsal bones and phalanges.
    B. In the anatomical position, the tibia is found medial to the fibula.
    C. The interosseous membrane of the leg is between the tibia and the fibula.
    D. Using correct anatomical terminology, the leg bones include only the tibia and the fibula.
    E. The fibula participates in the formation of the knee joint.

20. **Bones are constantly undergoing resorption for various reasons. Which of the following cells accomplishes this process?**
    A. osteoclast
    B. osteocyte
    C. osteoblast
    D. stem cell

21. **During fetal development, which of the following bones is formed via intramembranous ossification?**
    A. occipital
    B. scapula
    C. femur
    D. manubrium
    E. ulna

22. **Which of the following statements is TRUE?**
    A. The most common site of fracture in the humerus is the anatomical neck.
    B. The pectoral girdle makes a complete bony circle around the body at the level of the shoulders.
    C. The tubercle of a rib articulates with the transverse process of the same-numbered thoracic vertebra.
    D. The largest and strongest bone of the face is the maxilla.
    E. The layman's name for the scapula is the collarbone.

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24. **Which of the following sutures separates the two parietal bones?**
    A. squamous
    B. lambdoid
    C. coronal
    D. frontal
    E. sagittal

25. **How many bones make up the tarsus?**
    A. 4
    B. 5
    C. 6
    D. 7
    E. 8

26. **The superior nasal concha is part of which bone?**
    A. nasal
    B. ethmoid
    C. vomer
    D. sphenoid
    E. maxilla

27. **The zygomatic bones articulate with zygomatic processes extending from the:**
    A. frontal, parietal and temporal bones
    B. maxillary, nasal and ethmoid bones
    C. frontal, maxillary and temporal bones
    D. nasal, maxillary and parietal bones
    E. mandibular, frontal and ethmoid bones

28. **Which of the following statements is TRUE?**
    A. The ulna is the shorter of the two long bones of the forearm.
    B. The acetabulum is found on the sacrum.
    C. The second cervical vertebra is called axis.
    D. The external auditory meatus is part of the sphenoid bone.

29. **The head of the femur inserts into the:**
    A. iliac spine
    B. obturator foramen
    C. acetabulum
    D. ischial tuberosity
    E. foramen magnum

30. **A lack of weight-bearing exercise would:**
    A. cause bones to become thicker
    B. cause bones to store more calcium
    C. result in thin and brittle bones
    D. increase the length of a bone
    E. have no effect on a bone but would weaken the muscles

31. **Which of the following bones articulates with the radius?**
    A. pisiform
    B. scaphoid
    C. cuneiform
    D. capitate
    E. triquetral

32. **The pubic ramus and ischial ramus encircle the:**
    A. pubic symphysis
    B. obturator foramen
    C. acetabulum
    D. iliac crest
    E. fovia capitis

33. **The structural unit of compact bone is:**
    A. osseous matrix
    B. spongy bone
    C. lamellar bone
    D. the osteon

34. **Which of the following statements is TRUE?**
    A. Yellow marrow is found in almost all of the bones of an infant's body.
    B. Most bones of the body are formed by intramembranous ossification.
    C. Bones that increase in diameter via the addition of bone to their outer surfaces demonstrate appositional growth.
    D. Bones are classified by whether they are weight-bearing or protective in function.

35. **Which of the following statements is FALSE?**
    A. The bones of the fingers are called phalanges.
    B. The palm of the hand is formed by the metacarpal bones.
    C. The thumb is made up of just 2 bones.
    D. The clavicle is the only bone of the pectoral girdle to articulate with the axial skeleton.
    E. At the completion of pronation, the radius lies parallel to the ulna.

36. **Endosteum is in all of these places EXCEPT:**
    A. around the exterior of the femur
    B. on the trabeculae of spongy bone
    C. lining the central canal of an osteon
    D. often directly touching the bone marrow

37. **The parts of the sternum that articulate at the sternal angle are the:**
    A. xiphoid and body
    B. xiphoid and manubrium
    C. manubrium and body
    D. clavicle and manubrium
    E. first pair of ribs and body

38. **Thoracic vertebrae differ from the other vertebrae in that they have _____.**
    A. no transverse processes
    B. facets for attachment of ribs
    C. transverse foramina
    D. no intervertebral discs

39. **Which of the following is the abnormal curve often seen in pregnant women as they attempt to preserve their center of gravity toward the end of the pregnancy?**
    A. kyphosis
    B. hunchback
    C. scoliosis
    D. lordosis

40. **Which of the following is NOT considered to be a function of bone tissue and the skeletal system?**
    A. attachment of muscles, tendons, and ligaments
    B. storage of calcium and phosphorus
    C. formation of red blood cells
    D. support and protection of soft organs and tissues
    E. synthesis of vitamin D

41. **The thin columns of bone that form an irregular lattice in spongy bone are called:**
    A. osteons
    B. canaliculi
    C. lacunae
    D. Volkmann's (perforating) canals
    E. trabeculae

42. **The olecranon is at the proximal end of the:**
    A. humerus
    B. radius
    C. ulna
    D. tibia
    E. scapula

43. **The tibia articulates distally with the:**
    A. femur
    B. fibula
    C. talus
    D. cuboid
    E. Both B and C are correct.

44. **Which of the following statements is/are TRUE?**
    A. Hinge joints permit movement in only one plane.
    B. The articular surfaces of synovial joints are usually important contributors to joint stability.
    C. The only movement allowed between the first two cervical vertebrae is flexion.
    D. Moving the arm in full circle is an example of circumduction.
    E. A) and D)

45. **Bending your head back until it hurts is an example of _____.**
    A. flexion
    B. extension
    C. hyperextension
    D. circumduction

46. **An example of an interosseous fibrous joint is:**
    A. the clavicle and the scapula at the distal ends
    B. the radius and the ulna along their lengths
    C. between the vertebrae
    D. between the humerus and the glenoid cavity

47. **Fibrous joints are classified as:**
    A. pivot, hinge, and ball and socket
    B. symphysis, sacroiliac, and articular
    C. hinge, saddle, and ellipsoidal
    D. sutures, syndesmoses, and gomphoses
    E. none of the above

48. **When one is moving a limb away from the median plane of the body along the frontal plane, it is called:**
    A. abduction
    B. adduction
    C. inversion
    D. dorsiflexion
    E. extension