

INTEGRATIVE BIOLOGY 131 FALL 1993 FIRST MIDTERM M. DIAMOND

Part I. Find the correct answer:

1. The inner ear is located in which bone?
 - a. sphenoid
 - b. ethmoid
 - c. temporal
 - d. parietal

2. Which bone does not form the cheek bone?
 - a. zygomatic bone
 - b. sphenoid
 - c. zygomatic process of the maxilla
 - d. zygomatic process of the temporal

3. The mastoid sinus drains into the
 - a. inner ear
 - b. Eustachian tube
 - c. middle ear
 - d. external ear

4. The keystone of the facial bones is the
 - a. maxilla
 - b. sphenoid
 - c. mandible
 - d. lacrimal

5. Which bone forms part of the walls of the nasal cavity?
 - a. maxilla
 - b. ethmoid
 - c. frontal
 - d. mandible

6. The sella turcica is part of which bone?
 - a. maxilla
 - b. sphenoid
 - c. ethmoid
 - d. occipital

7. Which of the following is not a major tissue of the body?
 - a. connective tissue
 - b. nerve tissue
 - c. muscle tissue
 - d. bursa tissue

8. Hydroxyapatite is resilient due to _____ in the matrix.
- a. cells
 - b. fibers
 - c. calcium
 - d. phosphorus
9. Which process is not concerned with blood formation in the core of bones?
- a. hemopoietic
 - b. hemopoiesis
 - c. erythropoiesis
 - d. red marrow
10. Which bones do not contain hemopoietic tissue in the adult?
- a. sternum and ribs
 - b. proximal end of femur and humerus
 - c. bodies of vertebrae
 - d. maxilla
11. A foramen is a
- a. depression
 - b. cavity
 - c. tubular opening
 - d. hole
12. A trochanter is a
- a. large blunt process
 - b. depression
 - c. suture
 - d. rounded process for articulation
13. A slipped disc is due to
- a. the extrusion of the annulus fibrosus
 - b. the extrusion of the nucleus pulposus
 - c. the extrusion of the fibrocartilage
 - d. none of the above
14. The name of the first cervical vertebra is the
- a. atlas
 - b. axis
 - c. odontoid
 - d. hyoid
15. The term for "hunch back" is
- a. lordosis
 - b. scoliosis
 - c. kyphosis
 - d. thoracosis

16. The second costal cartilage articulates with the
- jugular notch
 - sternal angle
 - xiphoid
 - body of the sternum
17. The patella is found in the
- aponeurosis of the external oblique
 - the ligament of the gastrocnemius
 - the tendon of the quadriceps femoris
 - the tendon of the hamstring
18. The only joint where the upper extremity articulates with the axial skeleton is at the
- sternoclavicular
 - acromioclavicular
 - sternal angle
 - glenoid fossa
19. The only bone which does not form the acetabulum is the
- femur
 - ilium
 - ischium
 - pubic
20. Which bone in the pelvis supports the bone when sitting?
- ischium
 - ilium
 - pubic
 - tibia
21. Which structure does not consist of fibrocartilage?
- intervertebral disc
 - costal cartilage
 - pubic symphysis
 - menisci
22. The lateral malleolus is part of what bone?
- humerus
 - tibia
 - femur
 - fibula
23. The levator palpebral muscle
- closes the mouth
 - opens the eyelid
 - opens mouth
 - closes the eyelid

24. Which word does not belong in this list?
- a. aponeurosis
 - b. fascia
 - c. bursa
 - d. thin sheet of connective tissue
25. Which muscle attaches the scapula to the radius?
- a. triceps brachii
 - b. brachioradialis
 - c. subscapularis
 - d. biceps brachii
26. Which muscle attaches to the olecranon process and extends the forearm?
- a. triceps brachii
 - b. brachioradialis
 - c. biceps brachii
 - d. subscapularis
27. If the temporalis and masseter close the jaw, which muscle closes the mouth?
- a. buccinator
 - b. orbicularis oculi
 - c. orbicularis oris
 - d. temporomandibular
28. The inguinal canal which houses the spermatic cord or the round ligament is formed by what structure?
- a. galea aponeurotica
 - b. aponeurosis of the rectus femoris
 - c. aponeurosis of the external oblique
 - d. fascia of the quadriceps femoris
29. Which muscle is attached to the occiput, ligamentum nuchae, spines of thoracic vertebrae, clavicle, scapula?
- a. latissimus dorsi
 - b. pectoralis major
 - c. trapezius
 - d. sternocleidomastoid
30. Which muscle raises the clavicle, adducts the scapula, elevates and depresses the scapula, and extends the head?
- a. latissimus dorsi
 - b. pectoralis major
 - c. trapezius
 - d. sternocleidomastoid

31. The pectoralis major is a
- a. adductor
 - b. abductor
 - c. supinator
 - d. extensor
32. The muscle that gives the shape to the lateral forearm and flexes the forearm is the
- a. flexor carpi ulnaris
 - b. extensor carpi radialis
 - c. brachioradialis
 - d. biceps radii
33. The muscles of the pelvic floor include the
- a. coccygeal muscle
 - b. ischial quadratus
 - c. levator ani and transversus
 - d. pubic biceps
34. Which muscle does not cross both the hip and the knee joint?
- a. sartorius
 - b. quadriceps femoris
 - c. rectus femoris
 - d. iliotibial band
35. The base of the femoral triangle which includes the femoral artery, femoral vein and femoral nerve is formed by a ligament extending between the pubic tubercle and the anterior iliac spine. What is the name of this ligament?
- a. linea alba
 - b. central tendon
 - c. median raphe
 - d. inguinal ligament
36. Which function is not attributed to the sartorius?
- a. abducts thigh
 - b. adducts thigh
 - c. flexes knee
 - d. allows one to cross legs
37. An inguinal hernia is caused by
- a. the spermatic cord pushing into the inguinal canal
 - b. the intestine going into the inguinal canal
 - c. the round ligament entering the inguinal canal
 - d. the femoral artery entering the inguinal canal

38. The linea alba, the fascia lata, the inguinal ligament all have what in common?
- reticular fibers
 - fibrocartilage
 - collagenous fibers
 - hyaline cartilage
39. What function is not related to abdominal muscle?
- breathing
 - defecating
 - childbirth
 - extending vertebral column
40. The Achilles tendon, the strongest and thickest tendon, attaches the soleus and the gastrocnemius to what bone?
- first metatarsal
 - calcaneous
 - tibia
 - fibula
41. For muscle contraction to occur, calcium is released from the _____ in response to a nerve impulse.
- myosin
 - actin
 - neurofilament
 - sarcoplasmic reticulum
42. What structure does not contain smooth or visceral muscle?
- uterus
 - blood vessels
 - extraocular eye muscles
 - intraocular eye muscles
43. What phrase is not correct regarding Purkinje fibers?
- responsible for the conducting mechanism of the heart
 - have a great metabolic demand
 - are larger than regular cardiac muscle fibers
 - lie between the epicardium and the myocardium
44. What phrase is not correct regarding cardiac muscle?
- does not contain actin and myosin
 - has specialized junctions between muscle cells
 - has intercalated discs which have low resistance
 - are branched to spread rapid excitation

45. During skeletal muscle contraction which phrase is incorrect?
- I bands slide between A bands
 - a sarcomere shortens
 - the distance between the Z bands lengthens
 - actin slides between the myosin
46. What phrase is not correct regarding a skeletal muscle fiber?
- are multinucleated with peripherally placed nuclei
 - the sarcoplasm is filled with myofibrils
 - one fiber can be over one foot long
 - have continuous branching
47. Endochondral bone formation differs from intramembranous bone formation by
- possessing chondrocytes
 - osteocytes
 - osteoclasts
 - osteoblasts
48. During the growth of long bones, which process is not correct?
- the two epiphyses grow further apart
 - the epiphyseal disc enlarges
 - the epiphyseal disc retains the same dimensions
 - the hyaline cartilage in both the diaphysis and epiphysis is replaced by bone
49. A synovial joint does not possess which of these?
- synovial fluid
 - elastic cartilage with elastic fibers
 - synovial membrane
 - hyaline cartilage with collagenous fibers
50. The first blood vessel off the ascending aorta is the
- brachiocephalic artery
 - common carotid
 - pulmonary artery
 - coronary artery

Part II. True (A) or False (B)

- F 1. The mitral valve is attached to the ventricular wall by chordae tendinae attached to pectinate muscle.
- T 2. Papillary muscle, pectinate muscle and trabeculae carneae are all modifications of myocardium.
- F 3. Endothelium in the heart is synonymous with epicardium.

- F 4. The first heart sound (lubb) is the closure of the semilunar valves.
- T 5. Emptying of the ventricles is called systole and the AV valves close while the semilunar valves open.
- F 6. Stimulation of the vagus nerve increases the heartbeat.
- F 7. Pericardial fluid is found between the fibrous layers and the visceral layers of the pericardium.
- F 8. The bundle of His consists of Purkinje fibers within the interventricular foramen.
- F 9. The pacemaker of the heart is found in the left atrium between the entrance of the superior vena cava and the inferior vena cava.
- F 10. The auricle and atrium of the heart are synonymous.