MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) Which of the following is a function of the axial skeleton?  
   A) provides an attachment for muscles that move the appendicular skeleton  
   B) provides protection for the brain and spinal cord  
   C) provides an attachment for muscles that move the head, neck, and trunk  
   D) provides an attachment for muscles involved in respiration  
   E) All of the answers are correct.

2) The occipital condyles of the skull articulate with the  
   A) occipital bone.  
   B) mandible.  
   C) axis.  
   D) atlas.  
   E) first thoracic vertebra.

3) The foramen magnum is found in the ______ bone.  
   A) sphenoid  
   B) temporal  
   C) parietal  
   D) frontal  
   E) occipital

4) The suture that forms the articulation of the parietal bones with the frontal bone is the ______ suture.  
   A) rostral  
   B) squamosal  
   C) sagittal  
   D) lambdoidal  
   E) coronal

5) The zygomatic arch is formed by the union of processes from which two bones?  
   A) temporal and maxilla  
   B) frontal and temporal  
   C) zygomatic and maxilla  
   D) temporal and zygomatic  
   E) sphenoid and temporal

6) Which of these is not one of the facial bones?  
   A) vomer  
   B) zygomatic  
   C) maxilla  
   D) mandible  
   E) frontal

7) The hypophyseal fossa of the sella turcica contains the ______ gland.  
   A) pituitary  
   B) lacrimal  
   C) olfactory  
   D) nasal  
   E) sellar

8) A skull bone that could be described as looking like a bat with wings extended is the  
   A) crista galli.  
   B) maxilla.  
   C) cribriform.  
   D) ethmoid.  
   E) sphenoid.

9) The bony portion of the nasal septum is formed by the  
   A) nasal bones.
B) perpendicular plate of the ethmoid and vomer bone.
C) perpendicular plate of the ethmoid bone.
D) perpendicular plate of the ethmoid and sphenoid bone.
E) vomer and sphenoid bone.

10) The alveolar process of the mandible ______
A) supports the upper teeth.
B) is part of the temporomandibular joint.
C) supports the lower teeth.
D) articulates with the hyoid bone.
E) anchors the tongue.

11) As the result of an accident, Bill suffers a dislocated jaw. This injury would involve the ______
A) condylar process of the mandible.
B) alveolar process of the mandible.
C) greater cornu of the hyoid bone.
D) stylohyoid ligaments.
E) hyoid bone.

Figure 7-1 Floor of the Cranial Cavity
Use Figure 7-1 to answer the following questions:

12) Which bone structure has foramina for the olfactory nerves? ______
A) 5   B) 1   C) 3   D) 4   E) 2

13) Identify the sphenoid bone. ______
A) 2   B) 1   C) 3   D) 4   E) 5

14) Identify the internal occipital crest. ______
A) 5   B) 2   C) 3   D) 4   E) 1

15) Which structure encloses the pituitary gland? ______
16) What is the name of the structure labeled "7"?
A) foramen rotundum  
B) foramen spinosum  
C) optic canal  
D) foramen ovale  
E) foramen lacerum

17) What is the name of the structure labeled "8"?
A) carotid canal  
B) sella turcica  
C) foramen ovale  
D) foramen rotundum  
E) foramen spinosum

18) The _______ passes through the _______.  
A) internal jugular vein; jugular foramen  
B) optic nerve; foramen ovale  
C) vagus nerve; foramen magnum  
D) vestibulocochlear nerve; external acoustic meatus  
E) internal carotid artery; jugular foramen

19) The paranasal sinuses are located in all of the following bones, except the 
A) zygomatic.  
B) frontal.  
C) maxillae.  
D) ethmoid.  
E) sphenoid.

20) The membranous areas between the cranial bones of the fetal skull are   
A) Wormian bones.  
B) fontanels.  
C) foramina.  
D) fibrocartilaginous discs.  
E) sutures.

21) The four curves of the adult spinal column are not all present at birth. Which of the following are the secondary curves, those that do not appear until several months later?  
A) cervical and sacral  
B) thoracic and sacral  
C) thoracic and lumbar  
D) sacral and lumbar  
E) cervical and lumbar

22) The vertebral column contains _______ thoracic vertebrae.  
A) 12  
B) 4  
C) 5  
D) 7  
E) 31

23) The vertebral column contains _______ lumbar vertebrae.  
A) 31  
B) 5  
C) 4  
D) 12  
E) 7
24) Vertebrae of which regions are fused in the adult?  
A) sacral region  
B) sacral and coccygeal regions  
C) coccygeal region  
D) thoracic  
E) lumbar region

25) Which of the following are distinctive features of thoracic vertebrae?  
A) rib articulations  
B) heart-shaped bodies  
C) no transverse foramen  
D) long spinous processes  
E) All of the answers are correct.

26) Which bone(s) include(s) a manubrium?  
A) scapula  
B) all of the vertebrae  
C) sternum  
D) cervical vertebrae #1 and #2  
E) clavicle

27) The true ribs are  
A) ribs 1-7.  
B) ribs 1-7 and are called vertebrosternal ribs.  
C) called vertebrosternal ribs.  
D) ribs 8-12.  
E) called vertebrochondral ribs.

28) Which of the following is not a component of the appendicular skeleton?  
A) femur  
B) humerus  
C) sternum  
D) coxal bone  
E) scapula

29) The clavicle articulates with the  
A) manubrium and xiphoid process.  
B) glenoid cavity and scapular spine.  
C) coracoid process and the humerus.  
D) acromial process and the manubrium.  
E) acromial and coracoid processes.

30) Which of these constitutes the pectoral girdle?  
A) clavicles and scapulae  
B) clavicles, scapulae, humerus, radius, and ulna  
C) clavicles, scapulae, and humerus  
D) clavicles only  
E) clavicle, scapula, humerus, radius, ulna, and carpal bones

31) The head of the humerus articulates with the  
A) acetabulum.  
B) carpal bones.
C) glenoid cavity.
D) coxal bone.
E) trochlear notch.

32) The glenohumeral joint, or shoulder joint, is an articulation between which two bones? 32) ______
A) clavicle and humerus
B) humerus and ulna
C) clavicle and scapula
D) clavicle and sternum
E) scapula and humerus

33) In the anatomical position, the ulna is located ______ to the radius. 33) ______
A) superior  B) medial  C) proximal  D) distal  E) lateral

34) The condyle of the humerus consists of the 34) ______
A) trochlea and olecranon fossa.
B) capitulum and coronoid process.
C) head and neck.
D) medial and lateral epicondyles.
E) capitulum and trochlea.

35) There are ________ carpal bones located in the wrist, which form ________ rows of bones in the wrist. 35) ______
A) 6; 2  B) 2; 8  C) 10; 3  D) 8; 2  E) 4; 2

36) The bones that form the fingers are the 36) ______
A) metatarsals.
B) tarsals.
C) phalanges.
D) carpals.
E) metacarpals.
Figure 8-2 The Humerus

Use Figure 8-2 to answer the following questions:

37) Which structure articulates with the glenoid cavity?  37) ______
A) 4   B) 3   C) 5   D) 7   E) 6

38) Identify the structure labeled "9."  38) ______
A) olecranon process  
B) medial epicondyle  
C) greater tubercle  
D) trochlea  
E) lateral epicondyle

39) When the arm is straight, which structure accepts the olecranon?  39) ______
A) 9   B) 1   C) 4   D) 3   E) 8

40) Identify the place where the humerus often fractures.  40) ______
A) 5   B) 1   C) 6   D) 7   E) 2

41) Which structure does the radius rotate upon?  41) ______
A) 5   B) 4   C) 2   D) 3   E) 1

42) When seated, the weight of the body is borne by the  42) ______
A) obturator foramina.
B) ischial tuberosities.
C) posterior inferior iliac spines.
D) iliac crests.
E) inferior rami of the pubis.

43) A male has ______ pelvic outlet when compared to the woman's pelvic outlet. 43) ______
A) deeper    B) longer    C) larger    D) wider    E) smaller

44) Each coxal bone consists of the following three fused bones: 44) ______
A) ilium, ischium, and pubis
B) femur, patella, and tibia
C) femur, tibia, and fibula
D) hamate, capitate, and trapezium
E) ulna, radius, and humerus

45) The longest bone is the 45) ______
A) coxal bone.
B) sternum.
C) tibia.
D) humerus.
E) femur.

46) The medial border of the fibula is bound to the ______ by the interosseous membrane. 46) ______
A) patella
B) femur
C) navicular
D) tibia
E) femur and the tibia

47) Another name for the first toe is 47) ______
A) hallux.
B) phalanx.
C) hyoid.
D) lateral cuneiform.
E) pollex.
Figure 8-3 The Femur

Use Figure 8-3 to answer the following questions:

48) Which structure articulates with the acetabulum?  48) ______
   A) 1   B) 9   C) 2   D) 4   E) 5

49) Identify the diaphysis of the femur.  49) ______
   A) 3   B) 7   C) 5   D) 2   E) 1

50) Identify the structure labeled “2.”  50) ______
   A) lateral epicondyle
   B) linea aspera
   C) greater trochanter
   D) lateral condyle
   E) head

51) Identify the structure labeled “12.”  51) ______
   A) linea aspera
   B) lateral epicondyle
   C) head
   D) greater trochanter
   E) lateral condyle

52) Identify the structure labeled “3.”  52) ______
   A) head
   B) lateral epicondyle
   C) lesser trochanter
   D) lateral condyle
E) greater trochanter

53) Compared to the male pelvis, the female pelvis
A) has a thicker ischial tuberosity.
B) is larger.
C) has a greater angle inferior to the pubic symphysis.
D) has deep acetabula.
E) is heavier.

54) Joints can be classified structurally as
A) synovial.
B) cartilaginous.
C) fibrous.
D) bony.
E) All of the answers are correct.

55) A synovial joint is an example of a(n)
A) amphiarthrosis.
B) symphysis.
C) diarthrosis.
D) synarthrosis.
E) syndesmosis.

56) A suture is an example of a(n)
A) syndesmosis.
B) amphiarthrosis.
C) diarthrosis.
D) synarthrosis.
E) symphysis.

57) A freely movable joint is a(n)
A) symphysis.
B) synarthrosis.
C) diarthrosis.
D) syndesmosis.
E) amphiarthrosis.

58) The intervertebral disc joint is called a
A) synchondrosis.
B) glide joint.
C) symphysis.
D) synarthrosis.
E) condylar joint.

59) The joint between the carpals is a/an ________ joint.
A) pivot
B) amphiarthrosis
C) hinge
D) gliding
E) condylar

60) The joint between the trapezium and metacarpal bone of the thumb is an example of a(n) ________ joint.
A) gliding    B) pivot    C) condylar    D) saddle    E) hinge

61) The elbow joint is an example of a(n) ________ joint. 61) ______
A) saddle    B) gliding    C) pivot    D) hinge    E) condylar

62) A movement away from the midline of the body is termed 62) ______
A) abduction.
B) adduction.
C) inversion.
D) extension.
E) flexion.

63) An extension past the anatomical position is known as 63) ______
A) flexion.
B) rotation.
C) extension.
D) hyperextension.
E) double–jointed.

64) Which of the following joints is an example of a ball-and-socket joint? 64) ______
A) shoulder    B) knee    C) elbow    D) ankle    E) wrist

65) The joints between vertebrae are examples of ________ joints. 65) ______
A) pivot    B) saddle    C) condylar    D) gliding    E) hinge

66) Which of the following movements is a good example of depression? 66) ______
A) turning the hand palm upward
B) opening the mouth
C) extreme bending of the head backwards
D) spreading the fingers
E) moving the hand toward the shoulder
Use Figure 9-2 to answer the following questions:

67) Which structure acts as a cushion and consists of fibrous cartilage?  
   A) 3    B) 1    C) 5    D) 2    E) 4

68) Identify the structure at label "1."  
   A) bursa    B) articular cartilage    C) joint cavity    D) meniscus    E) synovial membrane

69) Identify the structure labeled "2."  
   A) synovial membrane    B) joint capsule    C) periosteum    D) serous membrane    E) intracapsular ligament

70) What type of tissue occurs at the structure labeled "3"?  
   A) articular cartilage    B) dense connective tissue    C) bone tissue    D) synovial membrane    E) fibrocartilage

71) Identify the structure labeled "5."  
   A) synovial membrane    B) joint capsule    C) intracapsular ligament    D) periosteum    E) serous membrane
72) A herniated intervertebral disc is caused by ______
A) transformation of fibrocartilage to hyaline cartilage.
B) loss of annulus fibrosis elasticity.
C) ossification of the vertebral disc.
D) protrusion of the nucleus pulposus.
E) slippage of the fibrocartilage disc.

73) The joint that permits the greatest range of mobility of any joint in the body is the ______ joint.
A) wrist  B) elbow  C) knee  D) shoulder  E) hip

74) The ligament that provides support to the front of the knee joint is the ______ ligament.
A) anterior cruciate
B) popliteal
C) posterior cruciate
D) tibial collateral
E) patellar

75) Factors that increase the stability of the hip joint include ______
A) supporting ligaments.
B) almost complete bony socket.
C) tough capsule.
D) strong muscular padding.
E) All of the answers are correct.

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

76) The skull and vertebral column are part of the ______ skeleton.

77) The occipital ______ are where the occipital bone articulates with the first cervical vertebra.

78) The parietal bones and occipital bone articulate at the ______ suture.

79) The zygomatic bone articulates with the ______ bone to form the zygomatic arch.

80) In a fetus, the fibrous membrane spanning developing bones of the skull is called a ______.

81) The first cervical vertebra is better known as the ______.

82) Ribs 8 to 12 are called ______ because they do not attach directly to the sternum.

83) The superior part of the sternum is called the ______.

84) Two prominent features of the clavicle are the conoid tubercle at the distal end and the ______ tuberosity at the proximal end.

85) The bones of the palm are called ______ bones.

86) The two pubic bones join medially at the ______.

87) Match the term with the correct definition.

1. synarthrosis  A) slightly movable joint
2. amphiarthrosis  B) immovable joint
3. diarthrosis  C) freely moving joint

87) ___________

88) Small pockets of synovial fluid that reduce friction and act as a shock absorber where ligaments and tendons rub against other tissues are called _______.
88) ___________

89) A _______ occurs when articulating surfaces are forced out of position.
89) ___________

90) The movement of a body part upward is called _______.
90) ___________