IMPORTANT INSTRUCTIONS: ANSWER ONLY 50 QUESTIONS. Do not answer more than 50 questions. If you answer more than 50 questions, then you will be graded on only the first 50 of these, regardless of whether the extra questions are answered correctly. Choose any 50 questions on the basis of your knowledge of the material. A good strategy is to first attempt to answer all 60 questions, but spend no more than 1 minute on any one. Then choose the 50 with which you are most confident, and then, and only then, transcribe your answers to the answer sheet. Be careful to record your answers on the appropriate number of the answer sheet. Completely blacken the letter of your choice. Completely strike out the number and all letters of the questions you choose not to answer. Turn in only your answer sheet. Keep the questions for future study.

e.g. to indicate response "B", do this: 12) A B C D E ; don't do this: 12) A B C D E

e.g. to omit a question, do this 12) A B C D E ; don't just leave it blank

1) If the following bones were listed from proximal to distal then which is out of place?
   A) radius
   B) scapula
   C) humerus
   D) metacarpal
   E) phalanx

2) Identify the correctly stated relationship.
   A) the popliteal region is distal to the sural region
   B) the auricular region is anterior to the buccal region
   C) the perineal region is anterior to the genital region
   D) the sternal angle is superior to the thyroid region
   E) the thenar region is superior to the antecubital region

3) If the following regions were listed from superior to inferior then which is out of place?
   A) frontal
   B) infraorbital
   C) labial
   D) palpebral
   E) mental

4) Which of the following does NOT refer to a region or feature of the torso?
   A) midclavicular
   B) sternal
   C) axillary
   D) sural
   E) inguinal

5) Which of the following is NOT a feature of the cranium?
   A) sella turcica
   B) temporal fossa
   C) jugular notch
   D) bregma
   E) mandible

6) Identify the INCORRECT statement. (Note: oriented does not mean intersected by.)
   A) the cribriform plate is oriented in the transverse plane
   B) the hard palate is oriented in the midsagittal plane
   C) the crista galli is oriented in the midsagittal plane
   D) the midclavicular line is oriented in the parasagittal plane
   E) the orbital septum is oriented in the coronal plane
7) Which abdominal region(s) shares linear borders with both the hypochondriac and iliac regions?
   A) lumbar
   B) umbilical
   C) hypogastric
   D) inguinal
   E) epigastric

8) Which of the following is NOT a path of arterial blood flow into the cranium?
   A) foramen magnum
   B) sphenopalatine foramen
   C) carotid canal
   D) jugular foramen
   E) foramen spinosum

9) Identify the correct statement regarding the midclavicular line.
   A) it marks the superior margin of the heart
   B) it is about one half inch medial to the areola in males
   C) it marks the level of the division of the superior and inferior mediastina
   D) it is the common linear border directly separating the hypogastric and hypochondriac regions
   E) it separates the right and left clavicles

10) Which of the following is NOT an anterior region of the body?
    A) pectoral
    B) mental
    C) nuchal
    D) antecubital
    E) palmar

11) Which of the following terms does NOT apply to bone?
    A) periosteum
    B) cancellous
    C) areolar
    D) medullary cavity
    E) diaphysis

12) Which of the following terms does NOT describe a general surface feature of bone?
    A) tubercle
    B) intercalated disc
    C) line
    D) condyle
    E) fossa

13) Which of the following terms may (sometimes) describe an articular surface of a bone?
    A) neck
    B) sulcus
    C) diaphysis
    D) fossa
    E) foramen

14) Identify the INCORRECT statement.
    A) the middle cranial fossa is anterior to the petrous portion of the temporal bone
    B) the perineal region is inferior to the sacral region
    C) McBurney’s point is located within the right hypochondriac region
    D) the carotid triangle is located within the anterior cervical triangle
    E) the sternal angle lies in the transverse plane at the level of the fourth thoracic intervertebral disc
15) Which of the following is/are formed by only a single bone?
   A) sternum
   B) pelvis
   C) foramen magnum
   D) orbit
   E) anterior cranial fossa

16) Identify the feature that is INCORRECTLY paired as one of the parts of the bone listed.
   A) styloid process – sphenoid
   B) infraorbital foramen – maxilla
   C) perpendicular plate – ethmoid
   D) temporal line – frontal
   E) external auditory meatus – temporal

17) Which of the following is NEITHER oriented in NOR intersected by the midsagittal plane?
   A) lambdoid suture
   B) coronal suture
   C) squamous suture
   D) sagittal suture
   E) pubic symphysis

18) Which of the following bones articulates with all of the others?
   A) zygomatic
   B) lacrimal
   C) maxilla
   D) palatine
   E) ethmoid

19) Identify the INCORRECTLY paired opening and paranasal sinus.
   A) superior meatus – sphenoid sinus
   B) semilunar hiatus – maxillary sinus
   C) middle meatus – frontal sinus
   D) middle meatus – maxillary sinus
   E) middle meatus – ethmoid air cells

20) Identify the INCORRECTLY paired example of tissue type with example.
   A) simple cuboidal epithelium – glands and their ducts
   B) stratified squamous epithelium – epidermis of skin
   C) reticular connective tissue – lymph organs
   D) endochondral bone – mandible
   E) smooth muscle – walls of blood vessels

21) Which of the following terms does NOT apply to hyaline cartilage?
   A) hyaluronic acid
   B) Haversian canal
   C) interstitial growth
   D) lacunae
   E) chondrocyte

22) If the following are listed from lateral to medial then which is out of place?
   A) malleus
   B) stapes
   C) modiolus
   D) fenestra ovale
   E) vestibule
23) Which of the following is NOT a bone of the appendicular skeleton?
   A) patella  
   B) ilium  
   C) scapula  
   D) manubrium  
   E) humerus

24) Which of the following is NOT a feature of the mandible?
   A) ramus  
   B) mandibular fossa  
   C) coronoid process  
   D) mental foramen  
   E) mandibular condyle

25) Which of the following relationships are synonymous in humans?
   A) dorsal – superior  
   B) palmar – medial  
   C) superficial – cranial  
   D) ventral – anterior  
   E) posterior – caudal

26) Identify the INCORRECT association of feature and the structure within it or that passes through it.
   A) optic foramen – ophthalmic artery  
   B) jugular foramen – vagus nerve  
   C) posterior cranial fossa – cerebellum  
   D) inferior orbital fissure – oculomotor nerve  
   E) foramen magnum – vertebral arteries

27) Which of the following is NOT descriptive of epithelial tissue in general?
   A) rapid regeneration  
   B) specialized cell junctions  
   C) acellularity  
   D) basal to apical polarity  
   E) avascularity

28) Identify the INCORRECT association of feature and the structure(s) contained within it.
   A) pericardial cavity – heart  
   B) middle cranial fossa – parietal lobes of the cerebrum  
   C) dorsal body cavity – central nervous system  
   D) perineum – anus  
   E) petrous temporal – semicircular canals

29) Which of the following transmits one or more of the cranial nerves?
   A) foramen magnum  
   B) carotid canal  
   C) sulcus of the sigmoid sinus  
   D) foramen spinosum  
   E) semilunar hiatus

30) Which of the following is NOT an abdominal region?
   A) umbilical  
   B) inguinal  
   C) lumbar  
   D) iliac  
   E) sacral
31) Which of the following is NOT a bone of the axial skeleton?
   A) hyoid
   B) clavicle
   C) incus
   D) sacrum
   E) costa

32) Which of the following foramina do NOT communicate with the middle cranial fossa?
   A) optic canal
   B) superior orbital fissure
   C) internal auditory meatus
   D) foramen spinosum
   E) foramen ovale

33) Identify the INCORRECT association of region and structure.
   A) crural – leg
   B) cubital – shoulder
   C) pollical – thumb
   D) ungual – fingertip
   E) thyroid – laryngeal eminence (“Adam’s apple”)

34) Identify the INCORRECT relationship.
   A) the pisiform is distal to the ulna
   B) the acromion is medial to the jugular notch
   C) the ilium is superior to the ischium
   D) the temporal region is superior to the infratemporal region
   E) the radius is lateral to the ulna

35) Identify the feature that is INCORRECTLY paired with its location.
   A) middle meningeal artery – pterion
   B) sulcus of the sigmoid sinus – middle cranial fossa
   C) facial canal – petrous temporal
   D) lacrimal fossa – orbit
   E) inferior meatus – nasal cavity

36) Which of the following is NOT a feature or part of the temporal bone?
   A) zygomatic process
   B) stylo mastoid foramen
   C) pharyngotympanic tube
   D) squamous portion
   E) pterygoid process

37) Which of the following is NOT a bone of the nasal cavity?
   A) maxilla
   B) ethmoid
   C) sphenoid
   D) palatine
   E) zygomatic

38) Identify the INCORRECT statement.
   A) the sphenoethmoid recess communicates (“unites”) the sphenoid sinus and nasal cavity
   B) foramen rotundum communicates the middle cranial fossa and the inferior orbital fissure
   C) the nasolacrimal duct communicates the orbit and nasal cavity
   D) foramina ovale and rotundum communicate the middle and inner ear cavities
   E) the hypoglossal canal communicates the foramen magnum and the jugular foramen
39) Which of the following is NOT a bone of the neurocranium?
   A) frontal
   B) occipital
   C) ethmoid
   D) nasal
   E) sphenoid

40) Which of the following does NOT transmit a branch of the trigeminal nerve?
   A) incisive foramen
   B) superior orbital fissure
   C) infraorbital foramen
   D) mandibular foramen
   E) mental foramen

41) Where can the vermiform appendix be palpated?
   A) two thirds the distance from the right anterior superior iliac spine to the umbilicus
   B) two thirds the distance from the umbilicus to the right anterior superior iliac spine
   C) two thirds the distance from the right midclavicular line to the right anterior superior iliac spine
   D) two thirds the distance from the pubic tubercle to the right anterior superior iliac spine
   E) two thirds the distance from the left anterior superior spine to the right anterior superior iliac spine

42) Identify the INCORRECT relationship.
   A) the infraorbital foramen is inferior to the supraorbital foramen
   B) the mental foramen is anterior to the mandibular foramen
   C) the styloid process is superior to the lesser cornu
   D) the foramen magnum is posterior to the sella turcica
   E) the sphenopalatine foramen is anterior to the nasal conchae

43) Identify the INCORRECT association of region and bone.
   A) antebrachium – radius
   B) hallux – phalanx
   C) manus – metacarpal
   D) pelvic – femur
   E) pes – calcaneus

44) Which of the following is NOT a superficial feature of the skull?
   A) mastoid process
   B) lambda
   C) occipital condyle
   D) internal auditory meatus
   E) mandibular angle

45) Which of the following is characteristic of connective tissues?
   A) high volume of extracellular matrix
   B) tight cell junctions
   C) excitability
   D) sarcoplasmic reticulum
   E) syncytium

46) Which of the following terms NEVER describes an articular surface of a bone?
   A) notch
   B) epicondyle
   C) caput
   D) facet
   E) condyle
47) Which of the following abdominal regions do NOT share a common linear border?
   A) umbilical and lumbar  
   B) umbilical and inguinal  
   C) umbilical and hypogastric  
   D) hypochondriac and epigastric  
   E) hypochondriac and lumbar

48) Which of the following structures are correctly paired as parts of the same bone?
   A) superior nuchal line – petrous portion  
   B) foramen rotundum – fenestra rotundum  
   C) middle nasal concha – perpendicular plate  
   D) coronoid process – mandibular fossa  
   E) pterygoid process – external occipital protuberance

49) Identify the INCORRECTLY stated relationship.
   A) the pectoral region is ventral to the mammary region  
   B) the cubitus is distal the axilla  
   C) the medial malleolus is proximal to the plantar region  
   D) the thorax is superior to the abdomen  
   E) the gluteal region is superior to the femoral region

50) Which of the following foramina transmits a nerve or artery of the same name?
   A) foramen lacerum  
   B) superior orbital fissure  
   C) internal auditory meatus  
   D) stylomastoid foramen  
   E) optic canal

51) Which of the following is NOT transmitted through the superior orbital fissure?
   A) oculomotor nerve  
   B) trochlear nerve  
   C) ophthalmic artery  
   D) ophthalmic nerve  
   E) abducens nerve

52) Which of the following is NOT transmitted through the jugular foramen?
   A) internal jugular vein  
   B) vestibulocochlear nerve  
   C) hypoglossal nerve  
   D) glossopharyngeal nerve  
   E) spinal accessory nerve

53) Which of the following is NOT a palpable surface landmark of the skeletal system?
   A) anterior superior iliac spine  
   B) clivus  
   C) pisiform  
   D) sternal angle  
   E) medial malleolus

54) Identify the INCORRECT association of structure and organ contained within it.
   A) alveolus – root of tooth  
   B) posterior cranial fossa – occipital cerebral lobe  
   C) pleural cavity – lung  
   D) inferior mediastinum – heart  
   E) anterior cranial fossa – frontal cerebral lobe
55) Identify the **INCORRECT** statement.
   A) the frontal plane separates the thenar and hypothenar regions
   B) symphyses always lie in the midsagittal plane
   C) the transverse plane separates the superior and inferior mediastina
   D) the hypogastric and inguinal regions are separated by the parasagittal plane
   E) the coronal plane separates the palmar and dorsum manus

56) Which of the following is **NOT** an air-filled space?
   A) sphenoid sinus
   B) external auditory meatus
   C) inner ear cavity
   D) middle ear cavity
   E) internal nares

57) Identify the **INCORRECT** regional boundary.
   A) inguinal ligament – division of abdominal and femoral regions
   B) clavicle – division of posterior cervical triangle and pectoral regions
   C) sternocleidomastoid muscle – division of submandibular and carotid triangles
   D) costal margin – division of thoracic and abdominal regions
   E) superior nuchal line – division of occipital and cervical regions

58) Where does elongation of intramembranous bones occur?
   A) diaphysis
   B) osteon
   C) diploe
   D) epiphyseal plate
   E) none of the above

59) Which of the following is **INCORRECTLY** defined?
   A) tubercle – small area of muscle or ligament attachment
   B) ramus – arm
   C) epiphysis – cartilaginous zone of hypertrophy
   D) fissure – a gap within or between bones
   E) foramen – hole

60) Identify the **INCORRECT** association.
   A) auricular cartilage – pinna
   B) alar cartilage – agger nasi
   C) costal cartilage – rib
   D) tarsal cartilage – palpebra
   E) septal cartilage – orbit