

N261 Human Anatomy
Lecture Exam #1, 1/5/97

1. If you were to study only the structure of the lower leg, you would be practicing _____ anatomy.
 - a. surface
 - b. gross
 - c. regional
 - d. olecranal
 - e. systemic
2. Another term for microscopic anatomy is _____.
 - a. histology
 - b. pathology
 - c. embryology
 - d. radiography
 - e. none of these is correct
3. Macromolecules such as carbohydrates are an example of the _____ level of structural hierarchy of human anatomy.
 - a. chemical
 - b. cellular
 - c. tissue
 - d. organ
 - e. organ system

Match the following (answers can be used more than once):

- | | |
|---|--------------|
| 4. The heart is _____ to the arms. | a. deep |
| 5. The stomach is _____ to the neck. | b. distal |
| 6. The wrist is _____ to the elbow. | c. inferior |
| 7. The lungs are _____ to the skin. | d. medial |
| 8. The dorsal body cavity is _____ to the ventral body cavity | e. posterior |

Match the following body parts with the region in which they are found:

- | | |
|---------------------------|----------------|
| 9. Anterior part of elbow | a. Antecubital |
| 10. Armpit | b. Axillary |
| 11. Back of the knee | c. Brachial |
| 12. Biceps of upper arm | d. Occipital |
| 13. Back of the head | e. Popliteal |

Multiple choice:

14. A _____ plane lies vertically and divides the body into left and right parts.
 - a. frontal
 - b. sagittal
 - c. transverse
 - d. coronal
 - e. oblique
15. A section that goes through both kidneys must be a _____ section.
 - a. frontal
 - b. sagittal
 - c. transverse
 - d. either a or b
 - e. either a or c

16. The diaphragm separates which two body cavities?
- dorsal and ventral
 - thoracic and abdominal
 - abdominal and pelvic
 - dorsal and pelvic
 - ventral and pelvic
17. In which of the following cavities is the mediastinum located?
- cranial
 - dorsal
 - thoracic
 - abdominal
 - pelvic
18. The gallbladder is located in the _____ region of the abdomen.
- epigastric
 - right lumbar
 - left lumbar
 - right hypochondriac
 - left hypochondriac
19. Which of the following molecules is not found in the plasma membrane of human cells?
- glycolipids
 - glycogen
 - cholesterol
 - proteins
 - all of these are found in the plasma membrane
20. According to the *fluid-mosaic model* of plasma membrane organization, phospholipids form a _____ structure.
- bilayer
 - crystalline
 - polar
 - fixed
 - integral
21. One extremely important function of the plasma membrane is its _____.
- rigidity
 - water solubility
 - selective permeability
 - protein packaging
 - none of these is an important function of the plasma membrane

Matching: match the following cell organelles with their function:

- | | |
|---------------------------------------|--------------------------------------|
| 22. centrioles | b. organize the mitotic spindle |
| 23. smooth endoplasmic reticulum | c. packaging and sorting of proteins |
| 24. golgi apparatus | d. participate in lipid metabolism |
| 25. mitochondria | e. site of protein synthesis |
| 26. ribosomes“powerhouse of the cell” | |

Multiple choice:

27. Which of the following structures should not be involved in synthesis, packaging and release by the cell of proteins that are to be secreted?
- rough ER
 - golgi apparatus
 - secretory vesicle
 - plasma membrane
 - all of these play a role in processing secretory proteins
28. Which of the following cellular organelles is not composed at least partially of lipid?
- ribosomes
 - mitochondria
 - endoplasmic reticulum
 - golgi apparatus
 - all of these organelles contain lipid
29. Which of the following is not a constituent of the cell cytoskeleton?
- microtubules
 - lammellae
 - microfilaments
 - intermediate filaments
 - all of these are constituents of the cytoskeleton
30. What is the longest phase of the cell cycle?
- anaphase
 - interphase
 - metaphase
 - prophase
 - telophase
31. Indicate the correct sequence of Mitosis from the choices below:
- anaphase
 - interphase
 - metaphase
 - prophase
 - telophase
- 1,2,3,4,5
 - 1,3,5,2,4
 - 2,4,3,1,5
 - 4,3,1,2,5
32. The basic tissue type that provides *support* is called _____ tissue.
- connective
 - epithelial
 - muscle
 - nervous
 - all of these provide support
33. Which of the following is not a special characteristic of epithelial tissue?
- has specialized contacts
 - avascular
 - incapable of regeneration
 - polarized

34. Which of the following epithelial cell types can be ciliated?
- simple squamous
 - simple cuboidal
 - simple columnar
 - stratified columnar
 - transitional

Matching: match the following epithelial tissues with their most appropriate function (answers can be used more than once).

- | | |
|-------------------------|----------------------------------|
| 35. simple squamous | a. extensible (stretches easily) |
| 36. simple cuboidal | b. protection |
| 37. stratified squamous | c. diffusion |
| 38. transitional | d. absorption & secretion |

Match the following connective tissues with a location where each is found:

- | | |
|-------------------------------------|-------------------------|
| 39. reticular connective tissue | a. ends of long bones |
| 40. dense regular connective tissue | b. intervertebral disks |
| 41. fibrocartilage | c. spleen |
| 42. elastic connective tissue | d. tendons |
| 43. hyaline cartilage | e. vocal cords |

Multiple choice

44. Microvilli, when they are present on epithelial cells, are found on the _____ membrane of the cells.
- basal
 - apical
 - lateral
 - basolateral
45. Salivary glands are composed of _____ tissue.
- connective
 - epithelial
 - nervous
 - muscular
46. Which of the following connective tissues has a matrix with no collagen fibers?
- areolar CT
 - dense CT
 - hyaline cartilage
 - reticular CT
47. Which of the following connective tissues has no matrix?
- adipose tissue
 - areolar CT
 - reticular CT
 - hyaline cartilage
 - bone
48. The pleural membranes that cover the lungs are an example of _____ membranes.
- cutaneous
 - deep fascia
 - laminar
 - mucous
 - serous

49. Which of the following types of muscle tissue is not striated?
- skeletal
 - cardiac
 - smooth
 - both cardiac and smooth
 - both skeletal and cardiac
50. The primary function of the skin is
- gas exchange
 - support
 - protection
 - excretion
 - all of these are functions of the skin
51. The epidermis is composed mainly of
- corneocytes.
 - keratinocytes.
 - Langerhans cells.
 - melanocytes.
 - Merkel cells.
52. Which of the following layers of the epidermis is not found in thin skin?
- stratum basale
 - stratum corneum
 - stratum granulosum
 - stratum lucidum
 - stratum spinosum
53. Which of the following strata is deep to the others?
- stratum basale
 - stratum corneum
 - stratum granulosum
 - stratum lucidum
 - stratum spinosum
54. What is the reticular layer of the dermis made of?
- areolar CT
 - dense irregular CT
 - dense regular CT
 - elastic CT
 - reticular CT
55. Why is the papillary layer of the dermis so named?
- because of the microvilli that it contains
 - because of the finger-like projections that protrude into the epidermis
 - because of the papillary fibers found in the matrix
 - both a & b
56. Which of the following pigments does not contribute to skin color?
- melanin
 - carotene
 - hemoglobin
 - all of these contribute to skin color

57. The area in a hair follicle where cells actively multiply to produce growing hair is called the
- cuticle.
 - matrix.
 - papilla.
 - root hair plexus.
 - root sheath.
58. Which of the following is not a constituent of the hair follicle wall?
- connective tissue root sheath
 - cortical root sheath
 - external root sheath
 - internal root sheath
 - all of these are constituents of the hair follicle wall

Match the following glands with their function and location:

- | | |
|---------------|--|
| 59. sebaceous | a. oily secretion; all over except for the palms and soles |
| 60. eccrine | b. oily secretion; abundant on palms and forehead |
| 61. apocrine | c. sweat; axillae, anal and genital areas |
| | d. sweat; most abundant on palms, soles, and forehead |

Match the following structural components of a long bone with the correct description:

- | | |
|----------------------|--|
| 62. diaphysis | a. CT that covers external bone surfaces |
| 63. epiphysis | b. CT that covers internal bone surfaces |
| 64. endosteum | c. filled with yellow marrow |
| 65. periosteum | d. made of compact bone |
| 66. medullary cavity | e. trabeculae surrounded by red marrow |

Multiple choice

67. Which of the following is not a function of bones?
- mineral storage
 - movement
 - protection
 - support
 - all of these are bone functions
68. The _____ artery is the main vessel that supplies the diaphysis of a long bone with blood.
- central
 - epiphyseal
 - nutrient
 - perforating
 - none of these is the main vessel
69. The circular sheets of bone matrix that make up the external and internal surfaces of compact bone are called _____ lamellae.
- circumferential
 - concentric
 - haversian
 - interstitial
 - perforating

70. There are two principle components of bone matrix, calcium phosphate and _____.
a. collagen
b. osteoblasts
c. osteoclasts
d. marrow
e. nervous tissue
71. A bone fracture that involves fragmentation of the bone into several pieces is called a _____.
a. simple
b. compound
c. comminuted
d. compression
e. impacted
72. A fossa is defined as a
a. narrow ridge of bone.
b. bony expansion carried on a narrow neck.
c. rounded articular projection.
d. shallow basin-like depression in a bone.
e. narrow, slit-like opening in a bone.
73. The protrusions of the frontal bone just superior to the orbits are called
a. superciliary arches.
b. glabellae.
c. anterior cranial fossae.
d. frontal sinuses.
e. pterygoid processes.
74. How many facial bones are there?
a. 8
b. 10
c. 12
d. 14
e. 16
75. The squamous suture is the articulation between the _____ bones.
a. occipital and parietal
b. occipital and frontal
c. parietal and temporal
d. temporal and frontal
e. sphenoid and zygomatic
76. Which of the following is not a region of the temporal bone?
a. lambdoid region
b. mastoid region
c. petrous region
d. squamous region
e. tympanic region
77. Which of the following bones articulates with the mandible?
a. maxillae
b. occipital
c. palatine
d. sphenoid
e. temporal

78. Which of the following bones is unpaired?
- ethmoid
 - lacrimal
 - maxillary
 - palatine
 - parietal
79. Which of the following features is absent on the hyoid bone?
- angle
 - body
 - greater horn
 - lesser horn
80. Excluding the sacrum and coccyx, how many total vertebrae are there?
- 16
 - 20
 - 22
 - 24
 - 26
81. Which of the following is *not* part of the vertebral arch of a vertebra?
- body
 - spinous process
 - lamina
 - pedicle
 - both a & b
82. Which vertebrae have intervertebral foramina?
- cervical
 - thoracic
 - lumbar
 - all vertebrae
83. Which vertebra is also called the vertebra prominens?
- C₁
 - C₇
 - T₁
 - T₇
 - L₁
84. The sacral structures that articulate with the two coxal bones are called _____.
- alae
 - annuli
 - hiati
 - superior articular processes
 - none of these articulates with the coxal bones
85. How many pairs of *true ribs* are there?
- 3
 - 5
 - 7
 - 9
 - 12

86. Which of the following rib structures articulates with the transverse processes of the thoracic vertebrae?
- head
 - neck
 - tubercle
 - angle
 - shaft
87. The capitulum of the humerus articulates with the _____.
- ulnar notch of the radius
 - head of the radius
 - trochlear notch of the ulna
 - coronoid process of the ulna
 - styloid process of the ulna
88. The movement of a bone around its long axis is an example of
- protraction.
 - rotation.
 - elevation.
 - circumduction.
89. The clavicle articulates with the _____ of the scapula.
- spine
 - acromion
 - coracoid process
 - superior angle
 - glenoid cavity
90. The subscapular fossa lies _____ the scapula
- on the anterior surface of
 - inferior to the spine of
 - superior to the spine of
 - posterior to the lateral margin of
 - none of these is the location of the subscapular fossa
91. Which of the following bones is not a carpal?
- capitate
 - hamate
 - navicular
 - scaphoid
 - triquetral
92. The part of the coxal bone that articulates with the femur is called the _____.
- acetabulum
 - iliac fossa
 - auricular surface
 - obturator foramen
93. When you sit down, you are sitting on your _____.
- iliac crest
 - iliac spine
 - pubic symphysis
 - ischial tuberosity
 - none of these

94. Where is the linea aspera located?
- anterior surface of the humerus
 - posterior surface of the humerus
 - anterior surface of the femur
 - posterior surface of the femur
95. The broad rough spot at the top of your crural region (proximal tibia) just below the knee is called the _____.
- proximal tibiofibular joint
 - anterior crest
 - tibial tuberosity
 - styloid process
 - patella
96. This bone has a distal structure called the lateral malleolus. What is it?
- femur
 - fibula
 - radius
 - tibia
 - ulna
97. The tarsal that articulates with the tibia and fibula is called the _____.
- calcaneus
 - cuboid
 - intermediate cuneiform
 - talus
98. Which of the following is not a basic feature or component of a synovial joint?
- articular cartilage
 - articular tendon
 - reinforcing ligament
 - synovial (joint) cavity
 - all of these are components of a synovial joint
99. Standing up on your tiptoes is also called
- dorsiflexion.
 - elevation.
 - plantar flexion.
 - pronation.
 - supination.
100. One of the major shortcomings of the skeletal system is that it
- doesn't secrete mucus.
 - does not provide protection.
 - has too many bones.
 - all of these