

LECTURE REVIEW QUESTIONS - cumulative

Questions are given in blocks of 10 questions, with correct answers following each block.

Single answer multiple choice.

1. To remove the pancreas, a surgeon would have to enter which cavity?

- a. pelvic
- b. thoracic
- c. abdominal
- d. vertebral

2. The space between the pleurae of the lungs that extends from the sternum to the vertebral column is the

- a. cranium
- b. mediastinum
- c. pericardial cavity
- d. thorax

3. To separate the anterior from the posterior portion of the brain, which plane would you use?

- a. transverse
- b. midsagittal
- c. sagittal
- d. coronal

4. Which term best describes the relationship of the elbow to the wrist? The elbow is:

- a. medial
- b. lateral
- c. proximal
- d. superior

5. A pulled muscle in the femoral region might affect your ability to:

- a. turn your head
- b. bend your arm

- c. walk
- d. move your fingers

6. The female reproductive organs are located in which cavity?

- a. thoracic
- b. pelvic
- c. abdominal
- d. mediastinum

7. Which statement best describes epithelium?

- a. It is always arranged in a single layer of cells.
- b. It contains large amounts of matrix.
- c. It has an abundant blood supply.
- d. Its free surface is exposed to the exterior of the body or to the interior of a hollow structure.

8. In parts of the body such as the urinary bladder, where considerable distention occurs, one can also expect to find the following type of cells.

- a. cuboidal
- b. pseudostratified
- c. transitional
- d. squamous

9. Stratified epithelium is usually found in areas of the body where the principal activity is

- a. filtration
- b. protection
- c. absorption
- d. diffusion

10. When a blood vessel is severed, the damaged epithelial tissue that lines the vessel would be

- a. mesothelium
- b. simple columnar
- c. endothelium

d. simple cuboidal

Answers: 1-c, 2-b, 3-d, 4-c, 5-c, 6-b, 7-d, 8-c, 9-b, 10-c

11. Ciliated epithelium that is destroyed by disease would cause malfunction of which body system?

- a. digestive b. respiratory c. skeletal d. circulatory

12. The inability to absorb digested nutrients and secrete mucus might indicate a disorder in which tissue?

- a. simple squamous b. transitional c. simple columnar d. stratified squamous

13. Which tissue provides the skin with resistance to wear and tear and serves to waterproof it?

- a. stratified squamous keratinized b. simple columnar c. transitional d. pseudostratified

14. Glands, such as the thyroid, that secrete their products into the blood, are classified as

- a. exocrine b. endocrine c. sebaceous d. digestive

15. Which statement best describes connective tissue?

- a. It usually contains a large amount of matrix.
b. It is always arranged in a single layer of cells.
c. It is primarily concerned with secretion.
d. It usually lines a body cavity

16. Which connective tissue cell would most likely increase its activity during an infection?

- a. osteoclast b. macrophage c. fibroblast d. fat cell

17. Torn ligaments and tendons would necessarily affect which tissue?

- a. elastic b. reticular c. collagenic d. transitional

18. Which of the following is not a serous membrane?

- a. visceral pleura b. pericardium c. parietal pleura d. lining of the heart

19. The shape of the external ear is maintained by

- a. adipose tissue b. elastic cartilage c. hyaline cartilage d. reticular tissue

20. Perichondrium, chondrocytes, and lacunae are characteristic of

- a. bone b. mesenchyme c. cartilage d. areolar tissue

Answers: 11-b, 12-c, 13-a, 14-b, 15-a, 16-b, 17-c, 18-d, 19-b, 20-c

21. Which tissue is responsible for transmitting impulses?

- a. connective b. epithelial c. nervous d. muscular

22. A fracture in the shaft of a bone would be a break in the

- a. epiphysis b. periosteum c. diaphysis d. articular disc

23. The structural unit of compact bone is the

- a. medullary cavity b. Haversian system c. trabecula d. periosteum

24. Bone formation is referred to as

- a. osteomyelitis b. osteoporosis c. chondrification d. ossification

25. The growth in length of long bone occurs at the

- a. epiphyseal plate b. articular cartilage c. epiphyseal line d. periosteum

26. The remodeling of bone is a function of which cells?

- a. chondrocytes and osteocytes b. osteoblasts and osteocytes
c. osteoblasts and osteoclasts d. chondroblasts and osteoclasts

27. The membrane covering a bone, that assumes a role in fracture repair is the

- a. periosteum b. perichondrium c. endosteum d. epiphysis

28. The framework of spongy bone tissue consists of

- a. Haversian systems b. trabeculae c. articular cartilage d. yellow marrow

29. An example of a bone formed by intramembranous ossification is the

- a. humerus b. femur c. tibia d. mandible

30. The portion of a long bone that stores yellow marrow in adults is the

- a. compact bone b. periosteum c. medullary cavity d. articular cartilage

Answers: 21-c, 22-c, 23-b, 24-d, 25-a, 26-c, 27-a, 28-b, 29-d, 30-c

31. Concentric rings of calcified intercellular substance arranged around Haversian canals are called

- a. lamellae b. lacunae c. trabeculae d. canaliculi

32. Which of the following is a component of the axial division of the skeleton?

- a. humerus b. occipital c. calcaneus d. trapezium

33. The bones of the pectoral girdle include the

- a. humerus and scapula b. humerus and clavicle c. scapula and clavicle d. humerus, ulna, and radius

34. The medial bone of the forearm, in the anatomical position, is the

- a. ulna b. radius c. humerus d. tibia

35. The lateral bone of the leg is the

- a. fibula b. femur c. tibia d. tarsus

36. The strength of bone is due to the

- a. inorganic components b. periosteum c. medullary cavity d. ligaments

37. Pericardial membranes surround the

- a. lungs b. heart c. liver d. kidney

38. As one stands in the anatomical position, which term refers to a structure that would be relatively low

in position?

- a. cranial b. inferior c. superior d. proximal

39. Histological classification of epithelial cells is based on the number of layers of cells and their

- a. staining properties b. location c. size d. shape

40. Basement membrane is characteristic of which tissue type?

- a. epithelial b. connective c. muscle d. nervous

Answers: 31-a, 32-b, 33-c, 34-a, 35-a, 36-a, 37-b, 38-b, 39-d, 40-a

41. Where would one not find simple squamous epithelium?

- a. mesothelium b. lymph vessels c. veins d. skin

42. Which of the following is not one of the 4 principal types of tissue?

- a. connective b. cartilaginous c. nervous d. muscle

43. The perichondrium surrounding cartilage tissue is composed of

- a. elastic cartilage b. fibrocartilage c. basement membrane d. dense fibrous connective tissue

44. The intervertebral discs are composed of

- a. elastic connective tissue b. elastic cartilage c. fibrocartilage d. hyaline cartilage

45. The lamellae in bone tissue are

- a. canals that contain a vascular and nervous supply
b. capsular spaces occupied by osteocytes
c. communicative canals between osteocytes
d. concentric inorganic layers of bone

46. A bone is considered to be a(an)

- a. tissue b. cell c. system d. organ

47. The appendicular skeleton contains one of the following.

- a. clavicle b. hyoid c. lumbar vertebra d. sternum

48. Most of the skeleton is formed by a process called

- a. intramembranous ossification b. cartilaginous ossification
c. endochondral ossification d. intermembranous ossification

49. Which of the following is not a long bone?
a. proximal phalanx b. talus c. metatarsal d. tibia

50. Periosteum is made of

a. white fibrocartilage b. areolar tissue c. dense fibrous connective tissue d. elastic connective tissue

Answers: 41-d, 42-b, 43-d, 44-c, 45-d, 46-d, 47-a, 48-c, 49-b, 50-c

51. The specialized bone cells that enzymatically cause bone reabsorption are

a. osteoblasts b. osteocytes c. periclasts d. osteoclasts

52. The microscopic examination of tissues is referred to as

a. embryology b. physiology c. histology d. cytology

53. In the terms below, the highest level of organization is the

a. tissue b. system c. organ d. cell

54. If you wanted to separate the abdominal from the thoracic cavity, which plane would you use?

a. sagittal b. transverse c. frontal d. coronal

55. An inflammation of the skin of the brachium involves which part of the body?

a. arm b. chest c. leg d. neck

56. The diamond-shaped space on the posterior side of the knee is the

a. cubital fossa b. posterior triangle c. popliteal fossa d. axillary fossa

57. The plantar surface is located on the

a. hand b. cubital fossa c. foot d. knee

58. Pleurae are

a. mucous membranes b. located in the abdominal cavity c. involved in digestion d. serous membranes

59. A man broke his collar bone; that is, he broke his

a. acromion b. clavicle c. scapula d. manubrium

60. If you were to assume the anatomical position, you would

a. lie face down

b. lie flat on your back with palms of hands flat on floor

c. stand erect with palms facing anteriorly

d. stand erect with palms relaxed, facing posteriorly

Answers: 51-d, 52-c, 53-b, 54-b, 55-a, 56-c, 57-c, 58-d, 59-b, 60-c

61. Which of the following is not classified as a tissue?

a. bone b. cartilage c. skin d. epithelium

62. Thoracic surgery involves opening the chest cavity. This surgery would not include any operations on the

a. esophagus b. pericardium c. spleen d. trachea

63. Where does the stomach lie with reference to the esophagus?

a. anterior b. inferior c. medial d. proximal

64. The relationship between the radius and the forearm is most comparable to that between the

a. tibia and leg b. metacarpals and the foot c. patella and the knee d. fibula and the leg

65. Another name for the chest cavity is the

a. ventral cavity b. thoracic cavity c. pleural cavity d. peritoneal cavity

66. Which term describes the location of the abdominal cavity with reference to the diaphragm?

a. anterior b. distal c. dorsal d. inferior

67. A section that separates the body into right and left portions would be

a. frontal b. transverse c. coronal d. sagittal

68. A section that divides the body into superior and inferior portions would be a

a. transverse section b. frontal section c. sagittal section d. coronal section

69. Which of the following bones is not included in the lower extremity?

a. ulna b. femur c. tibia d. talus

70. An osteocyte is a

a. bone-building cell b. bone-destroying cell c. mature bone cell d. bone marrow cell

Answers: 61-c, 62-c, 63-b, 64-d, 65-b, 66-d, 67-d, 68-a, 69-a, 70-c

71. A basement membrane occurs between

a. muscle and nerve tissue b. epithelial and connective tissue c. connective and muscle tissue

d. brain and nerve tissue

72. The epithelial tissue through which gases are exchanged between blood and the air in the lungs is

a. stratified squamous b. simple squamous c. simple cuboidal d. simple columnar

73. The tissue that forms the inner lining of respiratory passages is

a. pseudostratified b. ciliated c. mucus-secreting d. all of the above

74. Loose connective tissue contains

a. white fibers b. yellow fibers c. jellylike intercellular material d. all of the above

75. Tendons and ligaments are composed primarily of

a. adipose tissue b. fibrous connective tissue c. muscle tissue d. loose connective tissue

76. Cartilage tissues are likely to be slow in healing following an injury because

a. cartilage cells cannot reproduce b. cartilage tissues lack direct blood supplies

c. the intercellular material is semisolid d. cartilage cells are surrounded by fluids

77. Bone cells are arranged in concentric circles around longitudinal tubes called

a. haversian canals b. lacunae c. canaliculi d. lamellae

78. Which of the following terms is used to describe a part that is close to the surface?

a. ventral b. superficial c. proximal d. distal

79. The membrane on the surface of a lung is called the

a. visceral pleura b. parietal pleura c. visceral pericardium d. parietal pericardium

80. Which of the following organs occupies the abdominopelvic cavity?

a. heart b. trachea c. larynx d. none of the above

Answers: b, 72-b, 71- 73-d, 74-d, 75-b, 76-b, 77-a, 78-b, 79-a, 80-d

81. Which one of these epithelial tissue types has ciliated cells that line the mucous membranes of the

respiratory passages?

a. simple columnar b. stratified columnar c. ciliated stratified columnar d. pseudostratified columnar

82. The connective tissue type that forms tendons is

a. dense regular fibrous b. elastic c. areolar d. dense irregular fibrous

83. The tibia is _____ to the fibula.

a. distal b. posterior c. lateral d. medial

84. The sternum is _____ to the thoracic vertebrae.

a. dorsal b. cranial c. anterior d. median

85. Collagenic fiber characteristics include

a. yellow color b. occurs in bundles c. can stretch and return to original shape d. delicate fibers

86. Which of the following is the most complex?

a. cell b. organ system c. tissue d. organ

87. Which of the following is not axial?

a. mandible b. sternum c. rib d. clavicle

88. In anatomical terminology, "below" is referred to as

a. bottom b. inferior to c. posterior to d. ventral to

89. Which term does not belong with the others?

a. columnar b. areolar c. cuboidal d. squamous

90. The tissue level of organization would include the

- a. skin b. patella c. yellow marrow d. heart

Answers: 81-d, 82-a, 83-d, 84-c, 85-b, 86-b, 87-d, 88-b, 89-b, 90-c

91. A longitudinal plane that passes through both shoulders is a/an ____ plane.

- a. medial b. coronal c. sagittal d. transverse

92. The clavicle is ____ to the head.

- a. inferior b. proximal c. medial d. distal

93. Which of the following is not lined with mesothelium?

- a. cranial cavity b. pericardial cavity c. pleural cavity d. peritoneal cavity

94. Which structure is the dividing line between abdominal and pelvic regions?

- a. pubic symphysis b. diaphragm c. umbilicus d. pelvic brim

95. Connective tissues are involved in all but

- a. secretion b. support c. hemopoiesis d. storage

96. Which of the following is true?

- a. chondrocytes are found in spaces called canaliculi
b. perichondrium covers the surface of bone
c. osteocytes are bone-producing cells
d. cancellous bone is known as spongy bone

97. The abdominal cavity contains the

- a. heart and lungs b. reproductive organs and urinary bladder

- c. liver, spleen, stomach d. testes and ovaries

98. Which of the following is not a function of epithelium?

- a. absorption b. contraction c. protection d. filtration

99. Which term is most appropriate when referring to the skin in relation to muscle? The skin is ____.

- a. proximal b. posterior c. superficial d. deep

100. The second structure encountered by a pin entering the shaft of a long bone would be the

- a. spongy bone b. periosteum c. yellow marrow d. compact bone

Answers: 91-b, 92-a, 93-a, 94-d, 95-a, 96-d, 97-c, 98-b, 99-c, 100-d

101. Which of the following contain blood vessels?

- a. Haversian canals b. lacunae c. canaliculi d. all of the above

102. Which of the following is formed by intramembranous ossification?

- a. frontal b. metacarpal c. vertebra d. humerus

103. Which term does not apply to a serous membrane?

- a. mesothelium b. pericardium c. closed cavity d. endothelium

104. Flat bones lack

- a. periosteum b. medullary cavity c. diploe d. marrow

105. Which term does not belong with the others?

- a. transverse b. distal c. frontal d. parasagittal

106. Which term does not belong with the others?

- a. leg b. brachial c. femoral d. popliteal

107. A cut dividing the body into equal right and left halves would be through the ____ plane.

- a. parasagittal b. frontal c. midsagittal d. transverse

108. Which one of these spaces contains all the others?

- a. ventral b. pleural c. abdominal d. thoracic

109. Which one of the following is not intercellular material in connective tissue?

- a. macrophage b. collagenous fiber c. calcium salts d. plasma

110. Which one of the following is characteristic of elastic connective tissue fibers?

- a. yellow b. in bundles c. strong d. forms delicate network

Answers: 101-a, 102-a, 103-d, 104-b, 105-b, 106-b, 107-c, 108-a, 109-a, 110-a

111. Which terms would be associated with a serous membrane?

a. endothelium b. pseudostratified epithelium c. mesothelium d. a and c e. none of these

112. Which of the following would be located along the midsagittal plane of the body?

a. sternum b. foramen magnum c. external acoustic meatus d. a and b e. a, b, and c

113. Which organs are associated with the abdominopelvic cavity?

a. lung b. spinal cord c. heart d. stomach e. b and d

114. Which of the following would be characteristic of epithelium?

a. contains extensive inorganic intercellular material
b. covers free surfaces of the body

c. often involves secretion or absorption d. b and c
e. a and b

115. Which of the following lack blood vessels?

a. epidermis b. hyaline cartilage c. dermis d. loose connective tissue e. a and b

116. Which epithelial types are associated with the lining of the respiratory tract?

a. transitional epithelium b. endothelium c. mesothelium d. pseudostratified e. c and d

117. Which terms are associated with the criterion of "arrangement" of cells in epithelium?

a. squamous b. stratified c. simple d. transitional e. b and c

118. Which of the following contain blood vessels?

a. lacunae of cartilage b. lacunae of bone c. canaliculi d. Haversian canal e. c and d

119. Which of the following would be appropriate associations with hormone-producing glands?

a. ducts carry the secretions b. endocrine c. blood vessels carry secretions d. always close to

target organ e. b and c

120. Which terms would be associated with the trunk region of the body?

a. rib b. thoracic vertebrae c. diaphragm d. a and c e. all

Answers: 111. c; 112. d; 113. d; 114. d; 115. e, 116. d; 117. e; 118. d; 119. e; 120. e

121. Which of the following could apply to cartilage but not bone?

a. canaliculi b. lacunae c. calcium salts d. elastic fibers e. c and d

122. Which of the following are part of the axial skeleton?

a. clavicle b. innominate c. hyoid d. scapula e. none are

123. The tissue level of organization would include the

a. skin b. patella c. yellow marrow d. heart e. a and c

124. Which of the following apply to elastic connective tissue?

a. pinna of the ear b. dermis c. dense elastic fibers d. wall of the large artery, the aorta

e. c and d

125. Characteristics of epithelium would not include

a. cells in layers b. secretory c. abundant intercellular material d. basement membrane

e. all are characteristic

126. Dense collagenic fibers, fibroblasts, and little ground substance would describe

a. areolar connective tissue b. white fibrous connective tissue c. epidermis d. fibrous cartilage

e. b and d

127. Transitional epithelium

a. is a simple epithelium whose cells change shape b. appears stratified, but is actually simple

c. lines the mouth d. undergoes transition from stratified to simple e. none of these

128. Collagenic fiber characteristics include
- a. yellow color
 - b. occurs in buncles
 - c. can stretch and return to original shape
 - d. delicate fibers
 - e. a and b

129. Which of the following apply to hyaline cartilage?
- a. intramembranous ossification
 - b. articular cartilage
 - c. chondrocytes
 - d. skeleton of fetal appendage
 - e. all but a

130. Intercellular material of connective tissue would not include
- a. reticular fibers
 - b. gel-like ground substance
 - c. inorganic salts
 - d. fibroblasts
 - e. all are intercellular material

Answers: 121. d; 122. c; 123. c; 124. e, 125. c; 126. b; 127. e; 128. b; 129. e; 130. d

Matching. Match terms on left with choices on right.

- | | |
|---|------------------------------|
| 1. simple squamous epithelium
stomach | a. lining of |
| 2. simple cuboidal epithelium
airway | b. lining of a |
| 3. simple columnar epithelium
alveolus | c. lining of lung |
| 4. pseudostratified epithelium
salivary gland duct | d. lining of |
| 5. stratified squamous epithelium
mouth | e. lining of |
| | f. lining of urinary bladder |

Answers: 1-c, 2-d, 3-a, 4-b, 5-e

Matching. Match terms on left with choices on right.

- | | |
|-----------------|--------------------------|
| 6. chondrocyte | a. mucous-secreting cell |
| 7. fibroblast | b. fiber-producing cell |
| 8. adipose cell | c. phagocytic cell |

- | | |
|----------------|---------------------|
| 9. osteocyte | d. fat storage cell |
| 10. macrophage | e. bone cell |
| | f. cartilage cell |

Answers: 6-f, 7-b, 8-d, 9-e, 10-c

Matching. Match terms on left with choices on right.

- | | |
|------------------|------------|
| 11. costal | a. rump |
| 12. buccal | b. groin |
| 13. inguinal | c. chest |
| 14. pectoral | d. armpit |
| 15. plantar | e. neck |
| 16. antebrachium | f. mouth |
| 17. brachial | g. rib |
| 18. axillary | h. sole |
| 19. cervical | i. forearm |
| 20. gluteal | j. arm |

Answers: 11-g, 12-f, 13-b, 14-c, 15-h, 16-i, 17-j, 18-d, 19-e, 20-a

Matching.

One correct answer per question. Choices may be used more than once.

- a. reticular
- b. elastic conn. tissue
- c. areolar
- d. hyaline cartilage
- e. dense fibrous irregular
- f. dense fibrous regular
- g. bone
- h. elastic cartilage
- i. adipose

- 21. parallel bundles of dense collagen fibers
- 22. dermis of skin
- 23. embryonic appendicular skeleton
- 24. fat storage
- 25. yellow marrow

26. ground substance hard due to calcium salts

27. packing around blood vessels

Answers: 21-f, 22-e, 23-d, 24-i, 25-i, 26-g, 27-c

Matching.

One correct answer per question. Choices may be used more than once.

a. stratified squamous b. pseudostratified c. transitional
d. simple cuboidal e. simple columnar f. simple squamous

28. simple, but looks like two layers

29. forms epidermis

30. lines urinary bladder

31. peculiar surface cells change shape, slide over one another

32. forms thin serous membranes

33. single layer of flattened cells

Answers: 28-b, 29-a, 30-c, 31-c, 32-f, 33-f

True-False.

1. The axial portion of the body includes the arms and legs.

2. The diaphragm separates the thoracic and the abdominopelvic cavities.

3. The parietal pericardium is attached to the surface of the heart.

4. The organ systems responsible for integration and coordination are the nervous and endocrine systems.

5. The parietal pleura is a serous membrane.

6. Kidneys are part of the lymphatic system.

7. The ears are lateral to the eyes.

8. The elbow is distal to the wrist.

9. Yellow marrow functions in the formation of blood cells.

10. The long bone in the arm forms by intramembranous ossification.

Answers: 1-F, 2-T, 3-F, 4-T, 5-T, 6-F, 7-T, 8-F, 9-F, 10-F

11. Osteoclasts are cells that cause the breakdown of osseous tissue.

12. The appendicular skeleton consists of the parts that support and protect the head, neck, and trunk.

13. Connective tissue forms the surface and epithelial tissue the underlying layer of mucous, serous

membranes and skin.

14. Haversian canals are microscopic canals present in bone and cartilage.

15. Haversian canals contain blood vessels.

16. Osteoblasts are cells that form bone.

17. Bone, like other types of connective tissue, consists predominantly of intercellular material.

18. A descriptive name for osteocytes is "bone-destroying cells".

19. Red bone marrow performs a vital function, that of hemopoiesis or blood cell formation.

20. Red bone marrow is normally present in the epiphyses of all long bones.

Answers: 11-T, 12-F, 13-F, 14-F, 15-T, 16-T, 17-T, 18-F, 19-T, 20-F

21. The hollow cylindrical portion of a long bone is called the diaphysis.

22. Bone is a hard, rigid tissue because of calcium salts deposited in its matrix.

23. Each individual bone contains either red marrow or yellow marrow, but not both.

24. If you are standing, with the palms of your hands facing forward, your body is in the anatomical

position.

25. Mature bone cells are called osteocytes.

26. Reticular connective tissue fibers are white fibers.

canaliculi

27. Blood vessels penetrate the ground substance of cartilage.

12. T F axial skeleton

hyoid

Answers: 21-T, 22-T, 23-F, 24-T, 25-T, 26-F, 27-F

13. T F axial skeleton

clavicle

In each pair of items, if the second item is in some way part of the first item, circle the T. Otherwise, circle the F.

1. T F Haversian canals

bone marrow

14. T F axial skeleton

innominate bone

2. T F Haversian canals

osteocytes

15. T F appendicular skeleton

sternum

3. T F medullary cavity of a long bone

yellow marrow

16. T F stratified epithelium

transitional epithelium

4. T F Haversian canals

blood vessels

17. T F mucous membrane

pleura

5. T F hand

metacarpals

18. T F endocrine gland

hormones

6. T F cancellous bone

Haversian canals

19. T F exocrine gland

pituitary

7. T F cancellous bone

trabeculae

20. T F dense fibrous connective tissue

dermis

8. T F lacuna

osteocyte

Answers: 11-T, 12-T, 13-F, 14-F, 15-F, 16-T, 17-F, 18-T, 19-F, 20-T

Fill in. Choose the most correct choice for each statement.

9. T F lacuna

chondrocyte

1. The tissue that covers all body surfaces is _____.

10. T F Haversian systems

canaliculi

2. A single layer of flattened epithelial cells would constitute the tissue called _____.

3. The most common cells found in connective tissue are called _____.

Answers: 1-F, 2-F, 3-T, 4-T, 5-T, 6-F, 7-T, 8-T, 9-T, 10-T

4. Cartilage cells are called _____.

11. T F. cancellous bone

5. Cartilage cells occupy small chambers called _____.

6. The intervertebral discs that separate the individual bodies of vertebrae are composed of _____ cartilage.

7. The dorsal cavity of the body includes the _____ cavity and the vertebral cavity.

8. The thoracic cavity and the _____ cavity constitute the ventral body cavity.

9. The potential space between the pericardial membranes is called the _____.

10. The chemicals secreted by endocrine glands are called _____.

Answers: 1-epithelial, 2-simple squamous epithelium, 3-fibroblasts, 4-chondrocytes, 5-lacunae,

6-fibrous, 7-cranial, 8-abdominopelvic, 9-pericardial cavity, 10-hormones

11. The esophagus is part the the _____ system.

12. The heart is part of the _____ system.

13. A section that divides the body into anterior and posterior portions would be a(an) _____

section.

14. The medullary cavity of a long bone is filled with _____.

15. The tough, fibrous tissue that encloses a long bone is called the _____.

16. _____ is the process of blood cell formation.

17. The cartilaginous parts that separate the bodies of the vertebrae are called _____.

18. The membranous soft spots of a newborn's skull are called _____.

19. The bones of the wrist together are called the _____.

20. The joint created by the two pubic bones is the _____.

Answers: 11-digestive, 12-circulatory, 13-coronal or frontal, 14-yellow marrow, 15-periosteum,

16-hemopoiesis, 17-inter- vertebral discs, 18-fontanel, 19-carpals, 20-pubic symphysis

21. Glands that release their secretions into ducts for transportation are called _____.

22. The brain and spinal cord are located in the _____ cavity.

23. A _____ divides the body into right and left portions.

24. Another name for respiratory epithelium is _____.

25. Epithelium consisting of two or more layers is classified as _____.

26. Secretions from _____ glands travel through the circulatory system.

27. The _____ is the most common cell within connective tissue proper. It functions to produce fibers.

28. _____ is the most abundant cartilage in the body.

29. The specific tissue type that constitutes the epidermis is _____.

30. The specific tissue type that constitutes the dermis is _____.

Answers: 21-exocrine, 22-dorsal, 23-sagittal, 24-pseudostratified ciliated, 25-stratified,

26-endocrine, 27-fibroblast, 28-hyaline, 29-keratinized stratified squamous epithelium,

30-irregular dense fibrous connective tissue

31. Which muscle tissue is located in the heart wall? _____

32. The bones of the forearm are the _____.

33. The term referring to the armpit is the _____.

34. The shaft of a long bone is called the _____.

35. The region between the knee and the ankle is called the _____.

36. The outer layer of the skin is called the _____.

37. _____ means farther from the point of origin.

38. Phagocytic connective tissue cells are called _____.

39. The thin bony plates of compact bone in flat bones are known as _____.

40. The tarsals are bones in the _____.

Answers: 31-cardiac, 32-radius, ulna, 33-axillary fossa, 34-diaphysis, 35-leg, 36-epidermis,

37-distal, 38-macrophages, 39-tables, 40-foot

41. Give an example of an endocrine gland. _____

42. The bones of the fingers are called the _____.

43. Osteocytes are located in spaces called _____.

44. Red bone marrow manufactures _____.

45. The sole of the foot is called the _____ surface.

46. Name an example where the axial skeleton articulates with the appendicular skeleton. _____

Answers: 41-pituitary, thyroid, 42-phalanges, 43-lacunae, 44-red blood cells (erythrocytes),

45-plantar, 46-innominate/sacrum, manubrium/clavicle

Questions are given in a block of 10 questions, with correct answers following each block.

Single answer multiple choice.

1. A joint united by dense fibrous tissue that permits a slight degree of movement is a

a. suture b. syndesmosis c. symphysis d. synchondrosis

2. A joint of the body that contains a broad, flat disc of fibrocartilage would be classified as a

a. ball and socket joint b. suture c. symphysis joint d. gliding joint

3. The following characteristics--presence of a synovial cavity, articular cartilage, and articular capsule--

define what type of joint?

a. suture b. synchondrosis c. syndesmosis d. hinge

4. Connective tissue sacs that act as cushions in places where friction develops are referred to as

a. bursae b. menisci c. ligaments d. tendons

5. What type of joint affords triaxial movement?

a. hinge b. ball and socket c. saddle d. condyloid

6. Articulations that are slightly moveable are referred to as

a. amphiarthroses b. synarthroses c. diarthroses d. synostoses

7. The movement of a bone around its long axis is an example of

a. circumduction b. protraction c. rotation d. elevation

8. All of the following joints are freely movable except the

a. syndesmosis b. gliding c. pivot d. saddle

9. A movement in which the distal end of a bone moves in a circle while the proximal end remains relatively

stable is called

a. rotation b. circumduction c. protraction d. supination

10. Which of the following is not a synovial joint?

a. symphysis b. pivot c. gliding d. ball and socket

Answers: 1-b, 2-c, 3-d, 4-a, 5-b, 6-a, 7-c, 8-a, 9-b, 10-a

11. Which of these is not characteristic of a synovial joint?

a. articular cartilage b. epiphyseal cartilage c. synovial membrane d. fibrous capsule

12. Which of these is not an angular movement?

a. flexion b. abduction c. rotation d. hyperextension

13. The movement of the sole of the foot laterally is called

- a. inversion b. protraction c. eversion d. retraction

14. The ability of muscle tissue to receive and respond to a stimulus is referred to as

- a. contractility b. excitability c. elasticity d. extensibility

15. Which of the following groupings is incorrect?

a. skeletal, striated, voluntary b. smooth, unstriated, involuntary

c. cardiac, striated, voluntary d. cardiac, striated, involuntary

16. The connective tissue component of a skeletal muscle that surrounds fasciculi is called the

a. perimysium b. epimysium c. endomysium d. tendomysium

17. The ability of a muscle to return to its original shape after contraction or extension is called

a. extensibility b. elasticity c. contractility d. excitability

18. The layer of fibrous connective tissue that covers the entire muscle is the

a. endomysium b. perimysium c. epimysium d. sarcolemma

19. A muscle in a group that performs the desired action is referred to as the

- a. antagonist b. synergist c. fixator d. agonist

20. An injection into the lateral side of the thigh is given in which muscle?

a. adductor longus b. peroneus longus c. vastus lateralis d. deltoid

Answers: 11-b, 12-c, 13-c, 14-b, 15-c, 16-a, 17-b, 18-c, 19-d, 20-c

21. Because the biceps brachii muscle flexes the forearm when it contracts, most of the muscle lies

a. anterior to the humerus b. posterior to the humerus
c. anterior to the ulna and radius

d. posterior to the ulna and radius

22. The trapezius muscle is named on the basis of

- a. shape b. size c. location d. action

23. The muscle that turns the palm upward or anterior is the

a. tibialis anterior b. plantaris c. adductor longus d. supinator

24. The facial muscle that is used to wrinkle the forehead is the

a. orbicularis oculi b. frontalis c. temporalis d. masseter

25. A major muscle used to abduct the arm is the

a. teres minor b. teres major c. pectoralis major d. deltoid

26. All of the following are flexors of the leg except the

a. biceps femoris b. rectus femoris c. semitendinosus
d. semimembranosus

27. All of the following flex the forearm except the

a. brachialis b. brachioradialis c. biceps brachii d. triceps brachii

28. The latissimus dorsi, triceps brachii, and sacrospinalis all

a. are located on the posterior surface of the body

b. serve as extensors of some part of the body

c. serve as extensors of one part but flexors of another

d. none of the above

e. both a and b

29. Which movements are possible at both the shoulder and elbow joint?

a. abduction and flexion b. circumduction and flexion
c. abduction, circumduction and flexion

d. extension and flexion

30. Which is not a diarthrotic type of joint?

a. between vertebral articular processes b. intercarpal
c. distal tibio-fibular joint d. elbow

e. all are diarthrotic

Answers: 21-a, 22-a, 23-d, 24-b, 25-d, 26-b, 27-d, 28-e, 29-d, 30-c

31. A muscle that originates on both the spine of the scapula and the clavicle is the

a. pectoralis major b. trapezius c. deltoid d. sternocleidomastoid

32. The functional relationship between the tibialis anterior and the soleus is comparable to that between

the:

a. deltoid and biceps brachii b. pectoralis major and serratus anterior

c. pectoralis major and trapezius d. sternocleidomastoid and semispinalis

33. Which of the following is a functional joint classification?

a. fibrous b. synarthrosis c. synovial d. cartilaginous

34. A joint cavity is present in

a. fibrous joints b. amphiarthrotic joints c. cartilaginous joints d. synovial joints

35. Motion that increases the joint angle anteriorly is

a. abduction b. extension c. eversion d. flexion

36. Structurally, diarthroses are

a. fibrous joints b. synovial joints c. cartilaginous joints d. slightly movable

37. The circular, conelike movement of a body segment is

a. rotation b. pronation c. circumduction d. eversion

38. Which of the following is not characteristic of all diarthroses?

a. articular surfaces of hyaline cartilage b. joint capsule c. synovial membrane d. meniscus

39. In the cervical region all of the following movements are possible except

a. flexion b. hyperextension c. dorsiflexion d. lateral rotation

40. Which of the following joints can be readily and comfortably hyperextended?

a. tibiofemoral b. interphalangeal c. atlantooccipital d. elbow

Answers: 31-c, 32-d, 33-b, 34-d, 35-b, 36-b, 37-c, 38-d, 39-c, 40-c

41. Which of the following word pairs is incorrect?

a. syndesmosis - synarthrosis b. pivot - diarthrosis

c. symphysis - amphiarthrosis d. suture - synarthrosis

42. Which of the following is an agonist along with the supinator of the forearm?

a. brachioradialis b. flexor carpi radialis c. brachialis d. biceps brachii

43. Contraction of which of the following muscles would never result in an extension movement?

a. sacrospinalis b. biceps femoris c. rectus abdominis d. latissimus dorsi

44. The muscle tissue that can be consciously controlled is

a. smooth b. skeletal c. intercalated d. cardiac

45. Cardiac muscle is found in the wall of the

a. stomach b. intestine c. urinary bladder d. none of the above

46. The innermost layer of connective tissue in a skeletal muscle is called the

a. epimysium b. perimysium c. endomysium d. sarcomysium

47. Intercalated discs are found in

a. cardiac muscle b. smooth muscle c. skeletal muscle d. a and c

48. Which of the following is under voluntary control?

a. skeletal muscle b. smooth muscle c. cardiac muscle d. a and c

49. Which of the following connective tissues is in direct contact with individual skeletal muscle fibers?

a. periosteum b. epimysium c. perimysium d. endomysium

50. The extensor carpi ulnaris contracts to

a. supinate the forearm b. flex the thumb c. extend the arm d. adduct the hand

Answers: 41-a, 42-d, 43-c, 44-b, 45-d, 46-c, 47-a, 48-a, 49-d, 50-d

51. The latissimus dorsi originates primarily on the

a. humerus b. linea alba c. vertebral column d. clavicle

52. Which pair of muscles would not function as antagonists to one another?

a. biceps brachii and triceps brachii b. anterior deltoid and latissimus dorsi

c. rectus abdominis and sacrospinalis d. biceps femoris and gastrocnemius

53. Which of the following is not a rotator cuff muscle?

a. supraspinatus b. subscapularis c. teres minor d. deltoid

54. Which one of the following is located entirely or mostly on the posterior surface of some part of the

body?

a. biceps brachii b. external oblique c. triceps brachii d. quadriceps femoris

55. Paralysis of which of the following would make an individual unable to flex his thigh?

a. iliopsoas b. biceps femoris c. semitendinosus d. vastus medialis

56. Paralysis of which of the following muscles would make an individual unable to flex his leg?

a. gastrocnemius b. soleus c. rectus femoris d. gluteus medius

57. An injection in the rump would be given in which muscle?

a. gluteus medius b. tensor fascia latae c. gluteus minimus d. gluteus maximus

58. A pulled hamstring would include which muscle?

a. semitendinosus b. rectus femoris c. iliopsoas d. vastus medialis

59. Which muscle elevates the ribs?

a. serratus anterior b. pectoralis minor c. scalene d. transversus thoracis

60. Which muscle is a synergist in adduction of the arm?

a. pectoralis major b. deltoid c. supraspinatus d. rhomboid

Answers: 51-c, 52-d, 53-d, 54-c, 55-a, 56-a, 57-d, 58-a, 59-c, 60-d

61. The joints between the articular processes of vertebrae and between most carpal and tarsal bones are

termed

a. hinge b. gliding c. condyloid d. symphyses

62. The first metacarpal/carpal joint is a

a. condyloid b. saddle c. gliding d. hinge

63. Both the shoulder joint and the hip joint contain

a. an articular capsule b. menisci c. an iliofemoral ligament d. an scapulohumeral ligament

64. What is the action of the muscles located in the anterior compartment of the leg?

a. flex the leg b. dorsiflex the foot and/or extend the toes c. plantar flex the foot and flex the

toes d. extend the leg

65. The joint found between the flat bones of the skull is classified as

a. syndesmosis b. suture c. amphiarthrosis d. synchondrosis

66. Most joints of the body are

a. synchondroses b. symphyses c. synarthroses d. synovial

67. Which one of the following exemplifies a symphysis?

a. junction of two pubic bones b. junctions between vertebral articular facets

c. epiphyses of a long bone to the diaphysis
junction between parietal bones

68. The inability to produce the fluid that keeps most joints moist would likely be due to a disorder in the

a. bursae b. articular discs c. articular cartilages d. synovial membrane

69. The elbow is an example of a _____ joint.

a. uniaxial b. biaxial c. triaxial d. nonaxial

70. This movement is characteristic of the hip and shoulder joints.

a. pronation b. supination c. eversion d. lateral rotation

Answers: 61-b, 62-b, 63-a, 64-b, 65-b, 66-d, 67-a, 68-d, 69-a, 70-d

71. The shoulder joint is

a. triaxial b. ball and socket c. synovial d. all of the above

72. Which joint would not allow circumduction?

a. metacarpal/phalangeal II b. radioulnar/carpals c. carpometacarpal of the thumb d. interphalangeal

73. Which muscle could elevate the ribs as well as flex the neck?

a. sternocleidomastoid b. scalene c. splenius d. semispinalis

74. Which muscle is an antagonist to the action(s) provided by the pectoralis major?

a. pectoralis minor b. subscapularis c. serratus anterior d. supraspinatus

75. Which muscle is not a rotator of the arm?

a. subscapularis b. infraspinatus c. supraspinatus d. latissimus dorsi

76. Which muscle is not superficial in the body, seen just below the skin?

a. latissimus dorsi b. gastrocnemius c. internal oblique d. pectoralis major

77. A sphincter muscle includes the

a. temporalis b. platysma c. occipitofrontalis d. orbicularis oculi

78. Which action(s) does the soleus and gastrocnemius have in common?

a. plantar flexion of the foot b. dorsiflexion of the foot c. flexion of the leg d. a and c

79. Which muscle is involved in chewing?

a. temporalis b. orbicularis oculi c. occipitofrontalis d. sternocleidomastoid

80. Which of the following characterizes all cartilaginous joints?

a. contain plates of hyaline cartilage b. lack joint cavities c. are immovable d. all of the above do

Answers: 71-d, 72-d, 73-b, 74-d, 75-c, 76-c, 77-d, 78-a, 79-a, 80-b

81. When the movement at a joint is limited to rotation around only one axis, the joint is said to be

a. uniaxial b. biaxial c. nonaxial d. amphiarthrotic

82. Which of the following tends to form septa within the skeletal muscle, to reinforce the muscle?

a. fasciculus b. epimysium c. perimysium d. endomysium

83. Which action(s) would the brachialis and biceps brachii have in common?

a. supination of the forearm b. flexion of the arm c. flexion of the forearm d. a and c

84. Which action occurs for the rectus femoris but not the vastus muscles?

a. extension of the thigh b. extension of the leg c. flexion of the thigh d. flexion of the leg

85. If a pin enters a skeletal muscle, which of the following layers would be encountered secondly?

a. deep fascia b. endomysium c. perimysium d. epimysium

86. Which muscle name indicates the relative size of the muscle in its name?

a. transversus abdominis b. pectoralis major c. trapezius d. sartorius

87. Which muscle might act as a synergist in plantar flexion of the foot?

- a. tibialis anterior
- b. quadriceps femoris
- c. flexor digitorum longus
- d. extensor digitorum longus

88. Which muscle name indicates the shape of the muscle?

- a. gluteus maximus
- b. rectus abdominis
- c. rhomboid
- d. biceps brachii

89. All synovial joints possess all of the following features except:

- a. articular cartilage
- b. a joint capsule
- c. a synovial membrane
- d. an articular disc

90. Flexion and extension movements at the wrist take place at

- a. the joint between radius and ulna and the proximal row of carpals
- b. the joint between the proximal and distal rows of carpals
- c. the joints between carpals and metacarpals
- d. the joint between the distal radius and distal ulna

Answers: 81-a, 82-b, 83-c, 84-c, 85-d, 86-b, 87-b, 88-c, 89-d, 90-a

91. Which of the following would not be under the control of the autonomic nervous system?

- a. iris of the eye
- b. muscular layer of the uterus
- c. muscular layer of the pharynx
- d. muscular layer of a small artery

92. Which muscle is an agonist for adduction of the arm?

- a. pectoralis major
- b. pectoralis minor
- c. teres minor
- d. supraspinatus

93. Which muscle does not form part of the abdominal wall musculature?

- a. external oblique
- b. rectus abdominis
- c. transversus abdominis
- d. transversus thoracis

94. Which muscle is not a hamstring?

- a. semitendinosus
- b. gastrocnemius
- c. biceps femoris
- d. semimembranosus

95. The agonist for jaw closure is the

- a. platysma
- b. sternocleidomastoid
- c. masseter
- d. orbicularis oris

96. Which muscle moves the ribs?

- a. diaphragm
- b. serratus anterior
- c. serratus posterior inferior
- d. splenius

97. Which of the following is not a fibrous joint?

- a. suture
- b. syndesmosis
- c. synchondrosis
- d. interosseus membrane

98. Which muscle is not involved in a medial or lateral rotational movement within the forearm?

- a. supinator
- b. biceps brachii
- c. pronator teres
- d. palmaris longus

99. Which of the following is not a synovial joint?

- a. odontoid process and atlas
- b. between vertebral articular facets
- c. joint between bodies of two vertebrae
- d. joint between two tarsals

100. A synergist in abduction of the arm would be

- a. rhomboideus
- b. anterior deltoid
- c. biceps brachii
- d. pectoralis major

Answers: 91-c, 92-a, 93-d, 94-b, 95-c, 96-c, 97-c, 98-d, 99-c, 100-a

101. Examples of pivot joints include

- a. wrist (distal radius/proximal carpals)
- b. atlas/dens of axis
- c. humerus head/glenoid cavity
- d. radial head/ulna
- e. b and d

102. A joint united by dense fibrous tissue that permits a slight degree of movement is a(an)

- a. suture
- b. syndesmosis
- c. synarthrosis
- d. amphiarthrosis
- e. b and d

103. Which types of joint provides triaxial movement?

- a. hinge
- b. ball and socket
- c. saddle
- d. condyloid
- e. none do

104. Which of the following is an example of a hinge joint?

a. elbow b. knee c. interphalangeal d. tibia/talus e. all are

105. Which of the following is an antagonist in flexion of the forearm?

a. biceps brachii b. brachialis c. pronator teres d. coracobrachialis e. none are

106. Which of the following is an example of a diarthrodial joint?

a. knee b. gomphosis c. sagittal suture d. interosseus membrane of radius/ulna e. a and b

107. Which muscle is an antagonist in flexion of the thigh?

a. rectus femoris b. sartorius c. biceps femoris d. vastus intermedius e. b and c

108. Which muscle is involved in moving the vertebral column?

a. scaleni b. sacrospinalis c. sartorius d. diaphragm e. a and b

109. Which of the following movements would be permitted in a saddle joint?

a. medial rotation b. adduction c. circumduction d. all are e. all but a

110. Which muscle might act as synergist during extension of the arm?

a. trapezius b. anterior deltoid c. biceps brachii d. posterior deloid e. a and d

Answers: 101. e, 102. e, 103. b, 104. e, 105. e, 106. a, 107. c, 108. e, 109. e, 110. a

MATCHING. Match muscle on left with action on the right.

- | | |
|------------------------|-----------------------|
| 1. sternocleidomastoid | a. extension of thigh |
| 2. temporalis | b. flexion of head |
| 3. orbicularis oris | c. abduction of arm |
| 4. rhomboideus | d. close eyelids |
| 5. deltoid | e. flexion of leg |

- | | |
|--------------------------------|--------------------------------|
| 6. brachialis | f. puckers lips |
| 7. supinator | g. flexion of thigh |
| 8. serratus anterior | h. flexion of forearm |
| 9. palmaris longus forearm | i. lateral rotation of forearm |
| 10. adductor femoris mandible | j. elevation of mandible |
| 11. quadriceps femoris scapula | k. retraction of scapula |
| 12. gastrocnemius scapula | l. protraction of scapula |
| 13. gluteus maximus | m. flexion of hand |
| n. extension of leg | |

Answers: 1-b, 2-j, 3-f, 4-k, 5-c, 6-h, 7-i, 8-l, 9-m, 10-g, 11-n, 12-e, 13-a

MATCHING. Match term on left with joint(s) on right.

- | | |
|---------------------------|------------------------------|
| 14. synarthrosis thumb | a. carpometacarpal of thumb |
| 15. amphiarthrosis joints | b. shoulder and hip joints |
| 16. gliding | c. intervertebral discs |
| 17. pivot | d. radiocarpal joint |
| 18. condyloid joint | e. proximal radioulnar joint |
| 19. ball and socket | f. intertarsal joints |

- | |
|----------------|
| g. suture |
| h. knee, elbow |

Answers: 14-g, 15-c, 16-f, 17-e, 18-d, 19-b

MATCHING. Match movement term with appropriate description.

20. flexion a. arching the back
21. hyperextension away from the midline b. moving a limb
22. abduction of the body
23. adduction anterior- c. moving a bone in an
24. plantar flexion plane;decreasing the posterior
25. dorsiflexion two bones angle between the
- d. lowering the toe region of
- the foot toward the floor
- e. raising the toe region of
- the foot toward the shin
- f. moving the fingers toward
- the midline of the hand

Answers: 20-c, 21-a, 22-b, 23-f, 24-d , 25-e

MATCHING. Match statement on left with muscle tissue on the right.

26. greatest blood supply a. cardiac muscle
27. striated b. skeletal muscle
28. intercalated discs c. smooth muscle
29. tongue muscles of these d. more than one
30. diaphragm
31. unstriated
32. involuntary
33. many peripheral nuclei
34. voluntary

Answers: 26-a, 27-d, 28-a, 29-b, 30-b, 31-c, 32-d, 33-b, 34-b

TRUE/FALSE

1. In order to move a bone, a muscle must have its origin on that bone.
 2. The rectus femoris muscle may function as a flexor of the thigh, trunk, or leg.
 3. The sartorius is one of the hamstrings.
 4. The hamstring muscles function as leg flexors, as does the gastrocnemius.
 5. Muscles of the back (posterior trunk) function as extensors of the trunk.
 6. Extensor muscles play a more important part in the maintenance of upright posture than do flexors.
 7. The gastrocnemius and the tibialis anterior are examples of antagonists.
 8. All diarthroses permit free movement, but not necessarily the same kinds of movements, between articulating bones.
 9. The term synarthroses is another name for synovial joints.
 10. A large majority of joints in the body are synovial in type.
- Answers: 1-F, 2-F, 3-F, 4-T, 5-T, 6-T, 7-T, 8-T, 9-F, 10-T**
11. Most diarthroses are ball and socket type joints.
 12. Both the knee joint and the elbow joint are classified as hinge type synovial joints.
 13. Cartilaginous joints permit no movement between the articulating bones.
 14. The head of the humerus articulates with the acetabulum at the shoulder joint.
 15. No diarthroses permit all of the following movements: flexion, extension, abduction, adduction, rotation, and circumduction.

16. Moving the forearm so as to turn the palm forward, as it is in the anatomical position, is called

supination.

17. The humerus/ulna joint is an example of a fibrous joint.

18. Synovial joints, like fibrous and cartilaginous joints, are classified according to the material that

connects the bones.

19. The temporalis muscle depresses the mandible.

20. The diaphragm has an action on the ribs.

Answers: 11-F, 12-T, 13-F, 14-F, 15-F, 16-T, 17-F, 18-T, 19-F, 20-F

21. Condylloid joints are biaxial.

22. The rectus abdominis muscle flexes the vertebral column.

23. Most joints in the body are diarthroses.

24. All joints in the skull are forms of sutures.

25. Hinge joints are uniaxial.

Answers: 21-T, 22-T, 23-T, 24-F, 25-T

If the second item in each of the following pairs of items is in some way part of the first item, circle the T. Otherwise, circle the F.

1. T F cartilaginous joints

syndesmosis

2. T F cartilaginous joints

symphysis

3. T F fibrous joints synchondrosis

4. T F diarthrosis synovial membrane

5. T F diarthrosis articular cartilage

6. T F synovial joints sutures

7. T F knee joint medial and lateral menisci

8. T F symphysis intervertebral disc

9. T F diarthrosis pubic symphysis

10. T F synovial joint articular capsule

11. T F amphiarthrosis suture

Answers: 1-F, 2-T, 3-F, 4-T, 5-T, 6-F, 7-T, 8-T, 9-F, 10-T, 11-F

FILL IN

1. The band that occurs where two cardiac muscle cells join together is called a (an) _____.

2. A movement of a limb away from the midline is _____.

3. The circular movement of the end of a limb is _____.

4. The more stationary attachment of a muscle is known as the _____.

5. A _____ is a type of synarthrosis found between a diaphysis and an epiphysis at the epiphyseal plate.

6. _____ are the tough cartilaginous pads located in the knee joint that cushion and guide the articulating bones.

7. A _____ is a synovial fluid sac located near a joint between muscles or where a tendon passes over a bone.

8. Intercarpal and intertarsal joints are of the _____ type of diarthrosis.

9. The radiocarpal joint is an example of a _____ type of synovial joint.

10. _____ is a movement that decreases the joint angle on an anteroposterior plane.

Answers: 1-intercalated disc, 2-abduction, 3-circumduction, 4-origin, 5-synchondrosis, 6-menisci,

7-bursa, 8-gliding, 9-condyloid, 10-flexion

11. The quadriceps femoris group inserts on what structure? _____
12. The abdominal muscle running lengthwise along the midventral region is the _____.
13. The skeletal muscle separating the thoracic and abdominopelvic cavities is the _____.
14. _____ muscle tissue is located in the tongue.
15. _____ muscle tissue is located in the wall of the small intestine.
16. The tibialis anterior _____ the foot.
17. A muscle that performs the opposing action in a body movement is called the _____.
18. The main posterior muscle in the arm is the _____.
19. The large superficial muscle in the rump is the _____.
20. The pectoralis minor has what action on the scapula?

Answers: 11-tibial tuberosity, 12-rectus abdominis, 13-diaphragm, 14-skeletal, 15-smooth,

16-dorsiflexes/inverts, 17-antagonist, 18-triceps brachii, 19-gluteus maximus,

20-protraction

21. The insertion of the biceps brachii is the _____.
22. An example of a symphysis joint would be _____.
23. Give an example of a gliding joint. _____
24. The hamstrings all originate from what common structure? _____
25. Name a muscle that extends the trunk. _____
26. Give an action for the platysma muscle. _____
27. The deepest layer of connective tissue of a skeletal muscle is the _____.

28. A bundle of muscle fibers within a skeletal muscle is called the _____.
29. You have just touched your chin to your chest; this is _____ of the neck.
30. Standing on your toes as in ballet requires _____ (movement) of the foot.

Answers: 21-radial tuberosity of the radius, 22-pubic symphysis, 23-intertarsal joint, 24-ischial

tuberosity, 25-sacrospinalis, 26-depression of the corner of the mouth, 27-endorhynchium,

28-fasciculus, 29-flexion, 30-plantar flexion

31. The superficial calf muscles all insert on what bone? _____
32. Name the muscle used in raising your eyebrows. _____
33. The white, flat tendinous sheet attaching the external oblique to the linea alba is called a(an) _____.
34. The ankle joint is what type of synovial joint? _____
35. Give an action for the posterior deltoid. _____
36. Name a muscle that retracts the scapula. _____
37. When kicking a football, the action of the leg at the knee is _____.
38. The action that moves the distal end of the radius across the ulna, as in criss-crossing the bones, is _____.
39. Raising the arms laterally away from the body is called _____ of the arms.
40. Name a muscle that inserts on the coracoid process. _____

Answers: 31-calcaneus, 32-occipitofrontalis, 33-aponeurosis, 34-hinge, 35-extension of arm,

36-rhomboid, 37-extension, 38-pronation, 39-abduction, 40-pectoralis minor

41. The muscle that inserts on the olecranon process is the_____.

42. Name one head of the quadriceps femoris muscle._____

43. Give an action for the triceps brachii muscle._____

44. Name a muscle that elevates the scapula._____

45. Give an action for the gluteus maximus._____

46. Name a muscle that abducts the thigh._____

47. The insertion tendon of what muscle group contains the large sesamoid bone, the patella?_____

48. The common tendon for insertion of the gastrocnemius and soleus is called the _____ tendon.

49. The basic shape of the articular surface in a gliding joint is _____.

50. The inner layer of the articular capsule of a synovial joint is the _____.

Answers: 41-triceps brachii, 42-vastus lateralis, rectus femoris, 43-extension of arm, forearm,

44-levator scapulae, upper trapezius, 45-laterally rotate, extend thigh, 46-gluteus

medius, minimus, 47-quadriceps femoris, 48-calcaneal, 49-flat, 50-synovial membrane

Single answer multiple choice.

1. A patient has a disorder of the central nervous system. Which part of the system could be involved?

- a. nerves in the forearm
- b. nerves to the heart
- c. spinal cord
- d. sympathetic neurons

2. A neuron that transmits a nerve impulse to the central nervous system is called a(an)

- a. motor
- b. sensory
- c. bipolar
- d. association

3. The cell that does not belong with the others because of its function is the

- a. sensory neuron
- b. neuroglia
- c. motor neuron
- d. association neuron

4. Visceral effectors would not include

- a. muscle in the heart wall
- b. muscle fibers in the brachialis

- c. glandular cells in the parotid salivary gland
- d. muscle in the wall of the small intestine

5. In a person having a lesion in the spinal cord, the kind of neuron most likely involved is a(an)

- a. association
- b. motor
- c. sensory
- d. afferent

6. The portion of the nervous system usually considered to be involuntary is known as the

- a. central
- b. somatic
- c. autonomic
- d. peripheral

7. The structure of a neuron required for the regeneration of injured processes is the

- a. neurilemma
- b. myelin sheath
- c. cell body membrane
- d. a process cannot regenerate

8. Neurons that conduct impulses from the central nervous system to muscles or glands are referred to as

- a. afferent
- b. association
- c. voluntary
- d. efferent

9. Nerve fibers that convey impulses to skeletal muscles are called

- a. general somatic efferent
- b. general visceral afferent

- c. general somatic afferent
- d. general visceral efferent

10. Nerve impulses are conveyed from the cell body by the

- a. dendrite
- b. neurilemma
- c. axon
- d. myelin sheath

Answers:1-c, 2-b, 3-b, 4-b, 5-a, 6-c, 7-a, 8-d, 9-a, 10-c

11. A neuron that contains several dendrites and one axon is referred to as

- a. multipolar
- b. unipolar
- c. bipolar
- d. apolar

12. The junction between two neurons is called a

a. myoneural junction b. motor end plate c. hillock
d. synapse

13. Which of the following is composed of sensory neurons only?

a. ventral roots of spinal nerves b. white rami communicantes

c. gray rami communicantes d. dorsal roots of spinal nerves

14. A collection of nerve cell bodies outside the central nervous system is referred to as a

a. ganglion b. horn c. tract d. nucleus

15. The region (space) around the spinal cord that contains cerebrospinal fluid is the

a. subdural b. subarachnoid c. epidural d. supradural

16. In a reflex arc, which component represents a muscle or gland of the body?

a. center b. receptor c. sensory neuron d. effector

17. In a reflex arc, which component represents a muscle or gland?

a. association neuron b. receptor c. sensory neuron d. effector

18. An occlusion in a choroid plexus would interfere with an individual's ability to

a. breathe b. carry on peristalsis c. form cerebrospinal fluid d. store glycogen

19. An obstruction in the interventricular foramen would interfere with the flow of cerebrospinal fluid into

the:

a. lateral ventricle b. third ventricle c. fourth ventricle d. subarachnoid space of the spinal cord

20. Which structure does not belong with the others?

a. pons b. midbrain c. thalamus d. medulla

Answers: 11-a, 12-d, 13-d, 14-a, 15-b, 16-d, 17-d, 18-c, 19-b, 20-c

21. Which statement concerning the autonomic nervous system is not true?

a. It usually operates without any conscious control.

b. It regulates visceral activities.

c. All of its axons are afferent fibers.

d. It contains rami and ganglia.

22. Which of the following is not a visceral effector?

a. cardiac muscle b. glandular epithelium c. skeletal muscle d. smooth muscle

23. The cell bodies of preganglionic neurons of the parasympathetic division of the autonomic nervous system

are located in the

a. lateral gray horns of the thoracic cord b. nuclei in the brain stem and lateral gray horns of the

sacral cord c. lateral gray horns of the cervical cord d. lateral gray horns of the lumbar cord

24. Autonomic ganglia located on either side of the vertebral column from the base of the skull to the coccyx

are called

a. prevertebral ganglia b. collateral ganglia c. terminal ganglia d. lateral ganglia

25. Axons from preganglionic neurons of the parasympathetic division of the autonomic nervous system

a. synapse in sympathetic chain ganglia b. synapse in prevertebral ganglia c. synapse in terminal

ganglia d. are part of the thoracolumbar outflow

26. In their course from anterior rami to the sympathetic trunk, sympathetic preganglionic fibers are

contained in structures called

a. white rami communicantes b. meningeal branches c. dorsal rami d. gray rami communicantes

27. In a visceral autonomic reflex, which component conveys the impulse from the central nervous system to

the autonomic ganglion?

a. visceral efferent preganglionic neuron b. association neuron c. visceral efferent postganglionic neuron d. afferent neuron

28. Which of the following is not a characteristic of the sympathetic nervous system?

a. white rami communicantes b. inferior cervical ganglion c. terminal ganglion d. gray rami communicantes

29. Which statement is not true of the parasympathetic nervous system?

a. It forms the craniosacral outflow. b. It contains terminal ganglia. c. Its ganglia are near or within visceral effectors. d. It is distributed throughout the body.

30. Terminal ganglia receive

a. postganglionic fibers from the parasympathetic division
b. postganglionic fibers from the sympathetic division
c. preganglionic fibers from the parasympathetic division
d. preganglionic fibers from the sympathetic division

Answers: 21-c, 22-c, 23-b, 24-d, 25-c, 26-a, 27-a, 28-c, 29-d, 30-c

31. Which of the following is not a plexus of the spinal nerves?

a. cervical b. choroid c. brachial d. lumbar

32. Which of the following cranial nerves does not have parasympathetic fibers?

a. oculomotor b. accessory c. facial d. vagus

33. Which of the following is not involved in the autonomic n. s.?

a. sympathetic neurons b. facial nerve c. vagus nerve d. optic nerve

34. Which of the following is most closely associated with the diencephalon?

a. thalamus b. cerebral aqueduct c. cerebral peduncles d. corpus callosum

35. Which of the following lists the parts of a reflex arc in the correct sequence?

a. receptor, sensory neuron, motor neuron, interneuron, effector
b. effector, receptor, sensory neuron, motor neuron, interneuron
c. effector, sensory neuron, receptor, interneuron, motor neuron
d. receptor, sensory neuron, interneuron, motor neuron, effector

36. The phrenic nerve arises from the

a. cervical plexus b. brachial plexus c. lumbar plexus d. sacral plexus

37. The portion of the brain continuous with the spinal cord is the

a. hypothalamus b. pons c. cerebellum d. medulla

38. The cerebral aqueduct links the

a. lateral ventricles b. lateral ventricles and 3rd ventricle
c. 3rd and 4th ventricles d. lateral ventricles and 4th ventricle

39. Which of the following cranial nerves is not a mixed nerve?

a. vagus b. trigeminal c. glossopharyngeal d. vestibulocochlear

40. Clusters of neuron cell bodies are not the main constituents of

a. gray matter b. central nervous system nuclei c. ganglia d. tracts

Answers: 31-b, 32-b, 33-d, 34-a, 35-d, 36-a, 37-d, 38-c, 39-d, 40-d

41. The part of a neuron that conducts impulses toward its cell body is called a(an)

a. axon b. dendrite c. effector d. myelin sheath

42. The cytoplasmic extensions that provide the main receptive surfaces for neurons are

- a. neuroglia b. cell bodies c. axons d. dendrites

43. Masses of myelinated nerve fibers appear

- a. white b. gray c. brown d. transparent

44. A neuron that travels through the oculomotor nerve to an extrinsic muscle of the eye is of what type?

- a. afferent b. efferent c. association d. effector

45. Neurons that conduct impulses to the spinal cord or brain stem are called

- a. sensory neurons b. efferent neurons c. association neurons d. motor neurons

46. A diseased or injured neuron cannot regenerate if

- a. it is located in the PNS b. its axon has no myelin sheath c. its axon has no neurilemma
d. its axon has been cut

47. The presence of myelin on a process gives what characteristics?

- a. gray color b. increased rate of transmission c. regeneration of the process d. none of the above

48. Which of the following would not be true of a reflex arc?

- a. always includes a sensory neuron and a motor neuron
b. always has its center in the brain or the spinal cord
c. always terminates in muscle or gland
d. always includes an interneuron

49. The basal nuclei

- a. are located in the cerebrum b. consist mainly of gray matter
c. include the caudate and lentiform d. all of the above

50. If the anterior root of a spinal nerve were cut, what would be the result in the tissue or region that

nerve supplies?

- a. complete loss of movement b. complete loss of sensation c. complete loss of sensation and movement

d. loss of neither sensation nor movement, but only of autonomic control of blood vessels and sweat

glands

Answers: 41-b, 42-d, 43-a, 44-b, 45-a, 46-c, 47-b, 48-d, 49-d, 50-a

51. Loss of the sense of smell might be due to injury of which cranial nerve?

- a. I b. II c. III d. VIII

52. Which of the following endocrine glands are paired?

- a. pituitary b. pancreas c. pineal d. adrenal

53. Which of the following describes the main function of receptors?

a. they produce responses after stimuli have been received

b. they coordinate stimulus and response

c. they control the autonomic functions of the body

d. they make possible the body's detection of changes in its environment

54. Which of the following is not necessary for any of the responses referred to as reflexes?

- a. effectors b. receptors c. cerebral cortex d. synapses

55. Loss of autonomic control to thoracic and abdominal organs might be due to injury of which cranial nerve?

- a. III b. VII c. X d. IX

56. Failure to feel pain from an abscessed tooth is due to injury of the fifth cranial nerve. Its name is

- a. Trigeminal b. Mandibular c. Trochlear d. Facial

57. What term refers to the part of the nervous system composed of cranial and spinal nerves?

- a. autonomic b. central c. white matter d. peripheral

58. Which of the following is an effector?

- a. retina b. triceps brachii c. tympanic membrane
d. all of the above

59. Which of the following combinations are correct?

- a. C1-C5 - brachial plexus b. femoral nerve -
lumbosacral plexus
c. brachial plexus - nerve to diaphragm d. T2-T11 -
thoracic plexus

60. The hypothalamus is part of the

- a. basal nuclei b. diencephalon c. cerebrum d.
cerebellum

**Answers: 51-a, 52-d, 53-d, 54-c, 55-c, 56-a, 57-d, 58-b,
59-b, 60-b**

61. The central sulcus separates the

- a. frontal lobe from the parietal lobe b. parietal lobe
from the occipital lobe
c. parietal lobe from the temporal lobe d. occipital
lobe from the cerebellum

62. Which of the following is not part of the cerebrum?

- a. thalamus b. corpus callosum c. lateral ventricle
d. basal nuclei

63. Which of the following is not involved with spinal
nerve plexuses?

- a. anterior rami b. posterior rami c. cervical nerve
V d. thoracic nerve I

64. Characteristics of the endocrine system would not
include:

- a. secretions are released into blood vessels
b. involves a very rapid response (within milliseconds)
c. uses chemical messengers called hormones
d. includes adrenal gland and ovaries

65. Which of the following is not within the vertebral
canal?

- a. posterior primary ramus b. anterior root c.
posterior root ganglion d. posterior horns

66. Which of the following would be a sensory ganglion?

- a. posterior root ganglion b. superior mesenteric
ganglion c. lateral ganglion d. collateral ganglion

67. Which of the following combinations is not correct?

- a. corpus callosum - diencephalon b. corpora
quadrigemina - midbrain c. cortex - cerebellum
d. thalamus - diencephalon

68. Neuron cell bodies are located in all but

- a. horns of the spinal cord b. meninges c. basal
nuclei d. cortex

69. Which of the following is not associated with
cerebrospinal fluid?

- a. choroid plexus b. cervical plexus c. lateral
ventricle d. subarachnoid space

70. Which of the following would have its cell body
located in a ganglion?

- a. somatic motor neuron b. interneuron c. afferent
neuron d. preganglionic neuron

**Answers: 61-a, 62-a, 63-b, 64-b, 65-a, 66-a, 67-a, 68-b,
69-b, 70-c**

71. Which cranial nerve is not a major mixed nerve in
function?

- a. facial b. optic c. glossopharyngeal d. trigeminal

72. In the course from the anterior ramus to the
sympathetic trunk, sympathetic preganglionic neurons
are

contained in structures called

- a. white rami communicantes b. anterior rami c.
posterior rami d. splanchnic nerves

73. Which structure is not located inside the vertebral
canal?

- a. cauda equina b. dorsal root ganglion c. conus
medullaris d. anterior ramus

74. Which of the following would be true regarding
neurons?

- a. the axon of a motor neuron extends from the cell
body toward an effector

- b. a neuron usually has many axons, connected to
other neurons

c. sensory and motor neurons have dendrites while association neurons do not

d. the dendrite of one neuron usually connects to a dendrite of the next neuron

75. Regeneration of a neuron cell process is possible only if the affected neuron

a. has a myelin sheath b. has nodes of Ranvier c. has a neurilemma sheath

d. is in a ramus of a spinal nerve

76. Neuron cell bodies are located in

a. white matter of the spinal cord b. meninges c. gray matter of the spinal cord

d. central nuclei of the spinal nerves

77. Which combination is correct?

a. phrenic nerve - diaphragm b. cervical plexus - C1-C6

c. intercostal nerve - brachial plexus d. sciatic nerve - anterior arm

78. Characteristics of the endocrine system include

a. all endocrine secretions are steroids b. the pancreas and the salivary glands are endocrine

c. responses occur multiseconds after release of hormones d. secretions released into blood vessels

79. Axons from preganglionic neurons of the craniosacral outflow

a. synapse in the lateral chain b. synapse in prevertebral ganglia c. synapse in terminal ganglia

d. synapse in the superior mesenteric ganglia

80. The loss of the sense of hearing could result from injury of which cranial nerve?

a. I b. II c. V d. VIII

Answers: 71-b, 72-a, 73-d 74-a, 75-c, 76-c, 77-a, 78-d, 79-c, 80-d

81. Which of the following would be considered sensory in function?

a. terminal ganglion b. posterior root ganglion c. anterior ramus d. anterior root

82. A neuron that transmits an impulse away from the CNS is called a(an) neuron.

a. motor b. sensory c. afferent d. effector

83. Which of the following are true statements relating to the meninges?

a. The dura mater is composed of a dense fibrous connective tissue.

b. The dura mater around the brain is single-layered.

c. Venous sinuses occur between the two dural layers around the spinal cord.

d. The most superficial meninx is the arachnoid membrane.

84. A collection of neuron cell bodies outside the CNS is referred to as a

a. ganglion b. horn c. tract d. nucleus

85. Which of the following is a voluntary effector?

a. cochlea of ear b. salivary gland c. diaphragm d. myocardium of the heart

86. Which of the following combinations would be correct regarding the cranial nerves?

a. vagus - mixed b. trochlear - parasympathetic c. X - accessory d. VII - sensory

87. Which statement concerning the autonomic nervous system is not true?

a. it usually operates without any conscious control

b. it regulates visceral activities

c. all of its axons are afferent fibers

d. it contains rami and ganglia

88. Autonomic ganglia located on either side of the vertebral column are called

a. prevertebral ganglia b. collateral ganglia c. dorsal root ganglia d. lateral ganglia

89. Bundles of processes are the main constituents of

a. gray matter b. nuclei c. ganglia d. tracts

90. The region around the spinal cord that contains cerebrospinal fluid is the _____.

- a. central canal
- b. subarachnoid space
- c. epidural space
- d. ventricular space

Answers: 81-b, 82-a, 83-a, 84-a, 85-c, 86-a, 87-c, 88-d, 89-d, 90-b

91. In a reflex arc, which component represents a muscle or gland?

- a. association neuron
- b. receptor
- c. sensory neuron
- d. effector

92. A neuron that travels through the oculomotor nerve to an extrinsic muscle of the eye is of what type?

- a. afferent
- b. efferent
- c. association
- d. effector

93. Which of the following is not part of the cerebrum?

- a. thalamus
- b. corpus callosum
- c. lateral ventricle
- d. basal nuclei

94. Which of the following would be considered sensory in function?

- a. terminal ganglion
- b. posterior root ganglion
- c. anterior ramus
- d. anterior root

95. Which of the following are associated with the PNS?

- a. anterior root
- b. posterior ramus
- c. anterior funiculus
- d. olfactory tract
- e. a and b

96. Autonomic ganglia located on either side of the vertebral column are

- a. prevertebral
- b. lateral
- c. parasympathetic
- d. collateral
- e. b and c

97. Which of the following have their cell bodies located in ganglia?

- a. somatic motor neuron
- b. afferent neuron
- c. preganglionic neuron
- d. postganglionic neuron

e. b and d

98. Which are associated with cerebrospinal fluid?

- a. cerebral aqueduct
- b. lateral ventricle
- c. choroid plexus
- d. subarachnoid space
- e. all are

99. Which combinations are correct?

a. corpus callosum - diencephalon

b. corpora quadrigemina - midbrain

c. cortex - cerebellum

d. all are

e. all but a

100. Neuron cell bodies are located in

- a. horns of the spinal cord
- b. meninges
- c. basal nuclei
- d. cortex
- e. all but b

Answers: 91-d, 92-b, 93-a, 94-b, 95-e, 96-b, 97-e, 98-e, 99-e, 100-e

If the second item in each pair of items represents something included within or if it constitutes a part of the first item, circle the T. If it does not, circle the F.

1. T F neurilemma

Schwann cells

2. T F neurons in cerebral cortex

neurilemma

3. T F autonomic nervous system

sensory neurons

4. T F cerebrum

basal nuclei

5. T F diencephalon

thalamus

6. T F anterior gray horns

post ganglionic neurons

7. T F cerebrum

internal capsule

8. T F nerves

neuroglia

9. T F tracts of central nervous system

myelin sheaths

10. T F central nervous system

hypothalamus

Answers: 1-T, 2-F, 3-F, 4-T, 5-T, 6-F, 7-T, 8-F, 9-T, 10-T

11. T F visceral effector

smooth muscle of iris

12. T F somatic effectors

biceps brachii fibers

13. T F sympathetic ganglia

cell bodies of sensory neurons

14. T F terminal ganglia

preganglionic cell bodies

15. T F central nervous system

posterior root

16. T F subarachnoid space

cerebrospinal fluid

17. T F midbrain

medulla

18. T F forebrain

third ventricle

19. T F cerebral aqueduct

choroid plexus

20. T F sympathetic nervous system

collateral ganglia

Answers: 11-T, 12-T, 13-F, 14-F, 15-F, 16-T, 17-F, 18-T, 19-F, 20-T

21. T F central nervous system

rami communicantes

22. T F nervous tissue

glial cells

23. T F white matter

corpus callosum

24. T F central nervous system

optic tract

25. T F central nervous system

neurilemma

26. T F peripheral nervous system

dorsal root ganglion

Answers: 21-F, 22-T, 23-T, 24-T, 25-F, 26-T

Matching. Match term on left with appropriate term on right.

1. pons

a. forebrain

2. diencephalon

b. midbrain

3. hypothalamus

c. hindbrain

4. medulla

d. spinal cord

5. conus medullaris

6. superior colliculi

7. lateral ventricle

8. cerebral aqueduct

9. cerebellum

10. corpus callosum

Answers: 1-c, 2-a, 3-a, 4-c, 5-d, 6-b, 7-a, 8-b, 9-c, 10-a

Matching. Match terms on left with choices on right.

11. olfactory tract

a. PNS

12. neurilemma sheath

b. CNS

13. horns

c. both PNS and CNS

14. cauda equina

15. funiculi
16. cerebral aqueduct
17. olfactory nerve
18. posterior root
19. white rami communicans
20. posterior root ganglion

Answers: 11-b, 12-a, 13-b, 14-a, 15-b, 16-b, 17-a, 18-a, 19-a, 20-a

Matching. Match statement on left with choices on right.

- | | |
|--|---------|
| 21. long preganglionic, very short sympathetic | a. |
| postganglionic neurons parasympathetic | b. |
| 22. terminal ganglia | c. both |
| 23. somatic motor to pharyngeal muscles none of these | d. |
| 24. applies to visceral afferent from smooth muscle in stomach | |
| 25. sends some preganglionic processes through cranial nerves | |

Answers: 21-b, 22-b, 23-d, 24-d, 25-b

Fill in.

1. The cells within the CNS that give support to neurons are called _____.
2. Sheaths of _____ cells enclose the neuron processes outside of the brain and spinal cord.
3. A(an) _____ is the junction between the parts of two neurons.
4. Parts, such as muscles and glands, that are capable of responding to nerve impulses are called _____.

5. The outermost layer of the meninges is the _____.
6. The interconnected fluid-filled cavities within the brain are called _____.
7. The _____ root of a spinal nerve consists entirely of motor neuron axons.
8. The cerebrospinal fluid circulating within the CNS is produced by the vascular capillary network of the _____.
9. Stimuli are received by _____ of a neuron, which then conduct the impulses to the neuron cell body.

10. Myelin is only found in the CNS. T F

Answers: 1-neuroglia, 2-Schwann, 3-synapse, 4-effectors, 5-dura mater, 6-ventricles, 7-anterior, 8-choroid plexuses, 9-dendrites, 10-F

11. The junction between a neuron and a muscle cell is called the _____.
12. The large tract of white matter that connects the two cerebral hemispheres of the brain internally is the _____.
13. Columns of white matter in the spinal cord are called _____.
14. The spinal nerve roots radiating out inferiorly from the conus medullaris are called the _____ because of their resemblance to a horse's tail.
15. The spinal cord ends at what level of the vertebral column?
16. The _____ cranial nerve controls the vital autonomic functions of visceral organs such as the heart and stomach.
17. The _____ division of the autonomic nervous system has cell bodies located within the spinal cord from T1 through L2.
18. A neuron bringing an impulse to the central nervous system is called _____.

19. How many pairs of cranial nerves does a human have? _____

20. Bundles of myelinated processes within the central nervous system are called _____.

Answers: 11-neuroeffector (myoneural) junction, 12-corpus callosum, 13-funiculi, 14-cauda equina, 15-L1, 16-Vagus (X), 17-sympathetic, 18-sensory (afferent), 19-12, 20-tracts

21. A junction between a neuron and a gland cell is called a(an) _____.

22. What part of a neuron would be involved in the junction in question 21? _____

23. Which nerves are used by the sympathetic nervous system outflow? _____ (Be specific)

24. Which process of a neuron serves as the receptive end? _____

25. The gray matter forming the outer layer of the cerebellum is called the _____.

26. A network of interweaving nerves is called a(an) _____.

27. Name an example of such a network mentioned above in question 26. _____

28. The outer meningeal layer is composed of _____ tissue. (Be specific)

29. The breaks in the myelin sheath are called the _____.

30. The blood-filled spaces within the dura mater of the brain are called the _____.

Answers: 21-neuroeffector (neuroglandular), 22-axon, 23-thoracic, lumbar, 24-dendrite, 25-cortex, 26-plexus, 27-cervical, brachial, lumbosacral, 28-dense fibrous, 29-nodes of Ranvier, 30-venous sinuses

31. How many pairs of spinal nerves are there? _____

32. The cell body of an afferent neuron of a spinal nerve is located within this structure. _____

33. Give an example of white matter in the spinal cord. _____

34. The _____ rami of certain spinal nerves serve the extremities of the body.

35. The meningeal layer adjacent to the brain itself is the _____.

36. The opening in the skull through which the spinal cord passes is the _____.

37. The type of neuron found only within the CNS is called a(an) _____ neuron.

38. The channel inside the spinal cord is called the _____.

39. Name the endocrine gland associated with the hypothalamus of the brain. _____

Answers: 31-31 pairs, 32-posterior (dorsal) root ganglion, 33-funiculi, 34-anterior (ventral), 35-pia mater, 36-foramen magnum, 37-association, 38-central canal, 39-pituitary