

# Answer Key

## CHAPTER 1 AN INTRODUCTION TO THE STRUCTURE AND FUNCTION OF THE BODY

### Fill in the Blanks

1. Scientific method, p. 1
2. Hypothesis, p. 1
3. Experimentation, p. 1
4. Test group p. 1
5. Control group, p. 1

### True or False

6. T
7. F, a meter is 39.37 inches
8. T
9. T
10. F, a micron is another name for a micrometer

### Matching

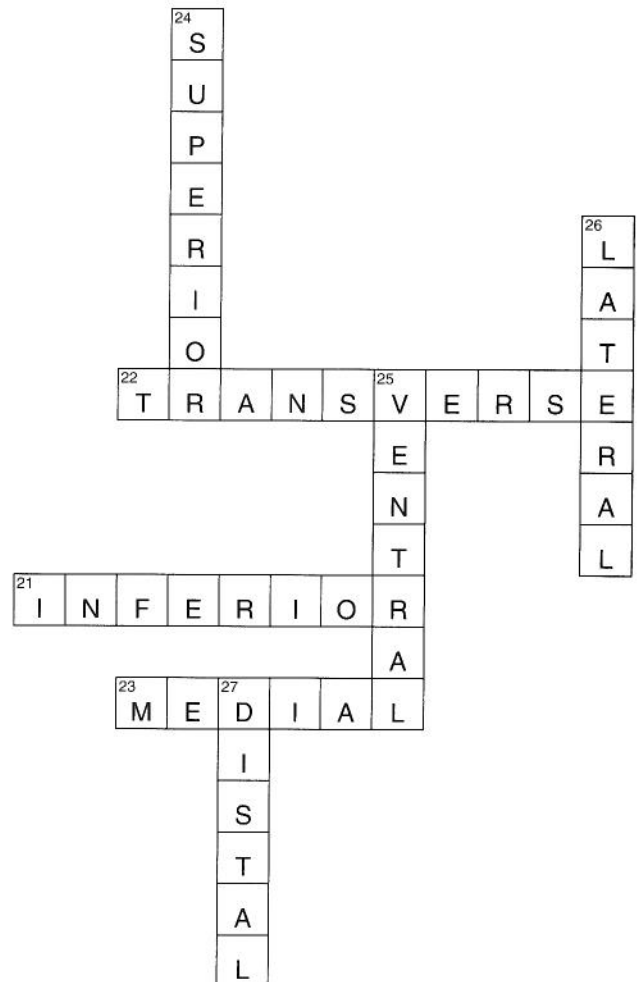
11. D, p. 3
12. E, p. 3
13. A, p. 3
14. C, p. 3
15. B, p. 3

### Matching

16. C, p. 5
17. A, p. 5
18. E, p. 5
19. D, p. 5
20. B, p. 5

### Crossword

21. Inferior
22. Transverse
23. Medial
24. Superior
25. Ventral
26. Lateral
27. Distal



Did you notice that the answers were arranged as they appear on the human body?

**Circle the correct answer**

- 28. Inferior, p. 5
- 29. Anterior, p. 5
- 30. Lateral, p. 5
- 31. Proximal, p. 5
- 32. Superficial, p. 6
- 33. Equal, p. 7
- 34. Anterior and posterior, p. 7
- 35. Upper and lower, p. 7
- 36. Frontal, p. 7

**Select the correct term**

- 37. A, p. 7
- 38. B, p. 9
- 39. A, p. 7
- 40. A, p. 7
- 41. A, p. 7
- 42. B, p. 9
- 43. A, p. 7

**Circle the one that does not belong**

- 44. Extremities (all others are part of the axial portions)
- 45. Cephalic (all others are part of the arm)
- 46. Plantar (all others are part of the face)
- 47. Carpal (all others are part of the leg or foot)
- 48. Tarsal (all others are part of the skull)

**Fill in the blanks**

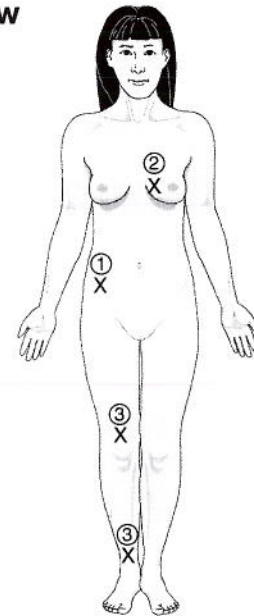
- 49. Survival, p. 12
- 50. Internal environment, p. 12
- 51. Feedback loop, p. 12
- 52. Negative, positive, p. 12
- 53. Stabilize, p. 13
- 54. Stimulatory, p. 13
- 55. Developmental processes, p. 14
- 56. Aging processes, p. 14

**Unscramble the words**

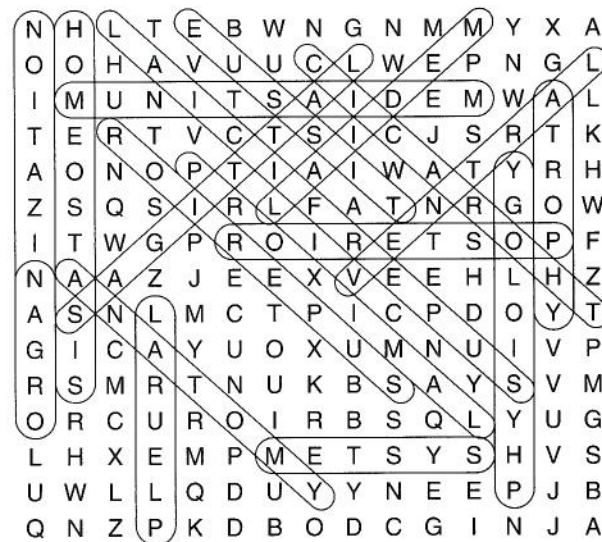
- 57. Axial
- 58. Physiology
- 59. Frontal
- 60. Dorsal
- 61. Organ

**Applying what you know**

- 62. #1 on diagram
- 63. #2 on diagram
- 64. #3 on diagram



65. WORD FIND



**Check your knowledge**

*Multiple choice*

- 1. A, p. 12
- 2. D, p. 8
- 3. B, p. 10
- 4. D, p. 7
- 5. A, p. 1
- 6. C, p. 7
- 7. C, p. 3
- 8. A, p. 7
- 9. C, p. 10
- 10. B, p. 8
- 11. D, p. 10
- 12. B, p. 10
- 13. C, p. 3

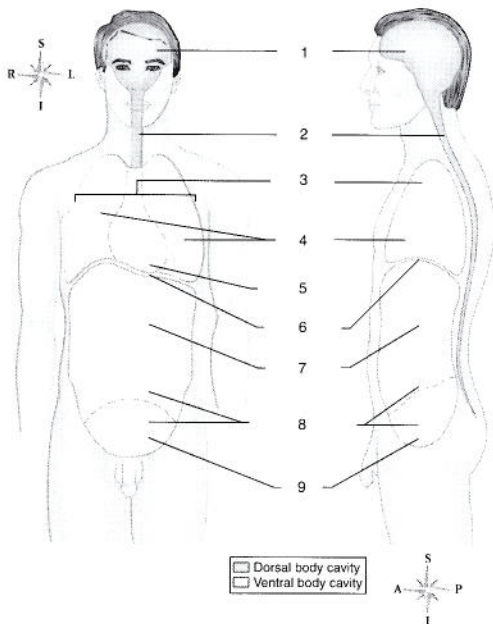
14. A, p. 7
15. D, p. 5
16. C, p. 5
17. D, p. 11
18. D, p. 7
19. A, p. 11
20. C, p. 5

**Matching**

21. F, p. 7
22. B, p. 11
23. J, p. 7
24. G, p. 1
25. H, p. 6
26. C, p. 7
27. D, p. 11
28. I, p. 5
29. A, p. 7
30. E, p. 3

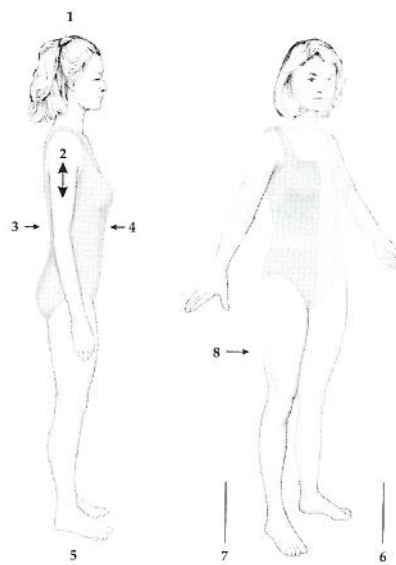
**Dorsal and ventral body cavities**

1. cranial cavity
2. spinal cavity
3. thoracic cavity
4. pleural cavity
5. mediastinum
6. diaphragm
7. abdominal cavity
8. abdominopelvic
9. pelvic



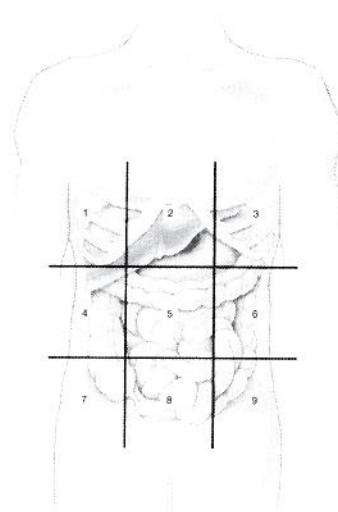
**Directions and planes of the body**

1. Superior
2. Proximal
3. Posterior (dorsal)
4. Anterior (ventral)
5. Inferior
6. Sagittal plane
7. Frontal plane
8. Lateral



**Regions of the abdomen**

1. Right hypochondriac region
2. Epigastric region
3. Left hypochondriac region
4. Right lumbar region
5. Umbilical region
6. Left lumbar region
7. Right iliac (inguinal) region
8. Hypogastric region
9. Left iliac (inguinal) region



## CHAPTER 2 CHEMISTRY OF LIFE

### Multiple choice

1. C, p. 21
2. B, p. 19
3. C, p. 19
4. A, p. 19
5. D, p. 20
6. C, p. 20
7. A, p. 20

### True or false

8. T, p. 19
9. molecules, p. 19
10. uncharged neutrons, p. 19
11. T, p. 19
12. T, p. 20

### Multiple choice

13. C, p. 21
14. B, p. 22
15. A, p. 22
16. B, p. 22
17. A, p. 23
18. C, p. 22

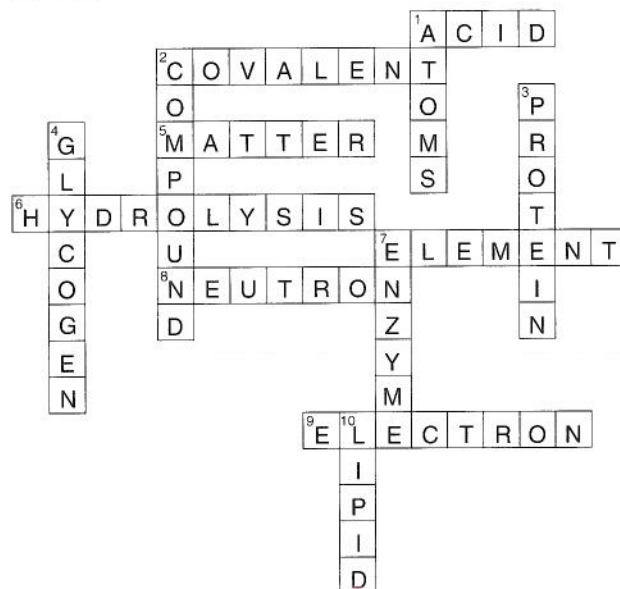
### Matching

19. H, p. 23
20. B, p. 23
21. E, p. 23
22. A, p. 23
23. G, p. 24
24. L, p. 24
25. J, p. 24
26. C, p. 24
27. D, p. 25
28. F, p. 25
29. K, p. 25
30. I, p. 25

### Select the best answer

31. A, p. 26
32. B, p. 26
33. D, p. 29
34. B, p. 26
35. C, p. 26
36. A, p. 26
37. A, p. 26
38. B, p. 26
39. C, p. 28
40. D, p. 29

## Crossword



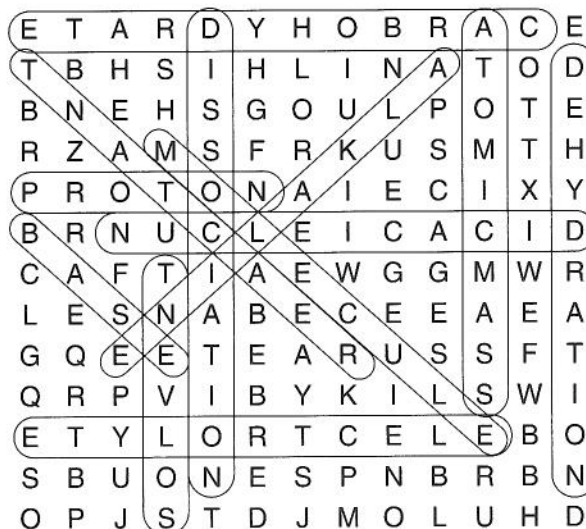
### Unscramble the words

41. Matter
42. Elements
43. Molecules
44. Organic
45. Electrolyte
46. Energy

### Applying what you know

47. Some fats can become solid at room temperature, such as the fat in butter and lard.
48. Radioactive isotopes will be used to measure Carol's thyroid activity. A diagnosis of hyperthyroidism or hypothyroidism will be based upon how rapidly or slowly the thyroid absorbs the radioactive iodine and emits radiation.

### 49. WORD FIND



**Check your knowledge**

1. Biochemistry, p. 19
2. Neutrons, p. 19
3. Higher, p. 20
4. Elements; compounds, p. 20
5. Stable, p. 21
6. Ion, p. 21
7. Inorganic, p. 23
8. Dehydration synthesis, p. 24
9. Chemical equation, p. 24
10. CO<sub>2</sub>, p. 25
11. Acids, p. 25
12. Buffers, p. 26
13. Carbohydrate, p. 26
14. Cholesterol, p. 28
15. Structural, p. 28

**Multiple choice**

16. A, p. 21
17. A, p. 21
18. B, p. 24
19. D, p. 26
20. C, p. 30

**CHAPTER 3  
CELLS AND TISSUES****Matching***Group A*

1. C, p. 38
2. E, p. 38
3. A, p. 38
4. B, p. 43
5. D, p. 42

*Group B*

6. D, p. 40
7. E, p. 40
8. A, p. 41
9. B, p. 42
10. C, p. 41

**Fill in the blanks**

11. Organelles, p. 38
12. Tissue typing, p. 39
13. Cilia, p. 42
14. Cellular respiration, p. 42
15. Ribosomes, p. 40
16. Mitochondria, p. 41
17. Lysosomes, p. 42
18. Golgi apparatus, p. 41
19. Centrioles, p. 42
20. Chromatin granules, p. 43

**Circle the correct choice**

21. A, p. 44
22. D, p. 44
23. B, p. 44
24. D, p. 46
25. C, p. 46
26. A, p. 46
27. B, p. 46
28. C, p. 46
29. D, p. 47
30. A, p. 48
31. B, p. 49
32. A, p. 49

**Circle the one that does not belong**

33. Uracil (RNA contains the base uracil, not DNA)
34. Telophase (the others are complementary base pairings of DNA)
35. Anaphase (the others refer to genes and heredity)
36. Thymine (the others refer to RNA)
37. Interphase (the others refer to translation)
38. Prophase (the others refer to anaphase)
39. Prophase (the others refer to interphase)
40. Metaphase (the others refer to telophase)
41. Gene (the others refer to stages of cell division)

## 42. Fill the missing areas

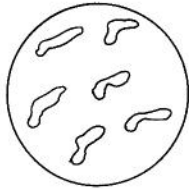
TISSUE	LOCATION	FUNCTION
<i>Epithelial</i>		
1.	1A.	1A. Absorption by diffusion of respiratory gases between alveolar air and blood
	1B.	1B. Absorption by diffusion, filtration, and osmosis
2.	2A. Surface of lining of mouth and esophagus	2A.
	2B. Surface of skin	2B.
3.	3. Surface layer of lining of stomach, intestines, and parts of respiratory tract	3.
4. Stratified transitional	4.	4.
5.	5. Surface of lining of trachea	5.
6.	6.	6. Secretion; absorption
<i>Connective</i>		
1.	1. Between other tissues and organs	1.
2. Adipose	2.	2.
3.	3.	3. Flexible but strong connection
4.	4. Skeleton	4.
5.	5. Part of nasal septum, larynx, rings in trachea and bronchi, disks between vertebrae, external ear	5.
6.	6.	6. Transportation
7. Hemopoietic tissue	7.	7.
<i>Muscle</i>		
1.	1. Muscles that attach to bones, eyeball muscles, upper third of esophagus	1.
2. Cardiac	2.	
3.	3. Walls of digestive, respiratory, and genitourinary tracts; walls of blood and large lymphatic vessels; ducts of glands; intrinsic eye muscles; arrector muscles of hair	3.
<i>Nervous</i>		
1. Nerve cells	1. Brain and spinal cord, nerves	1.

**Unscramble the words**

- 43. Translation
- 44. Interphase
- 45. Gene
- 46. Osmosis
- 47. Diffusion
- 48. Tissues

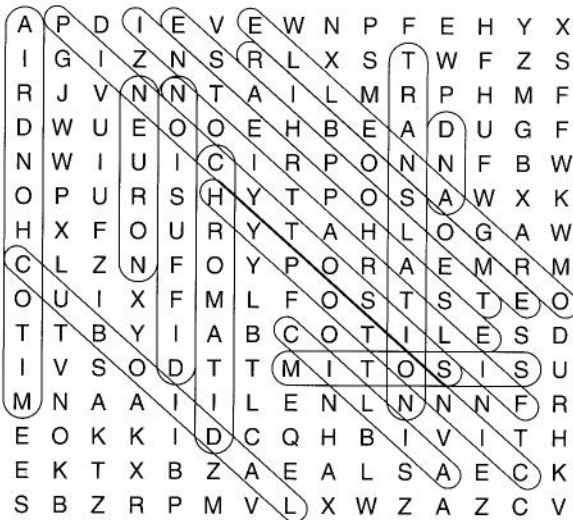
**Applying what you know**

49.

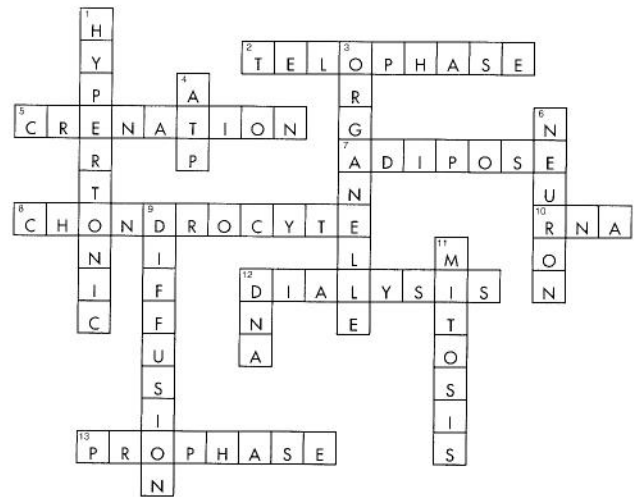


- 50. Diffusion
- 51. Absorption of oxygen into Ms. Bence's blood.
- 52. Merrily may have exceeded the 18–24% desirable body fat composition. Fitness depends more on the percentage and ratio of specific tissue types than the overall amount of tissue present.

**53. WORD FIND**



**Crossword**



**Check your knowledge**

*Multiple choice*

- 1. A, p. 39
- 2. B, p. 40
- 3. B, p. 41
- 4. A, p. 42
- 5. C, p. 46
- 6. A, p. 49
- 7. D, p. 50
- 8. B, p. 52
- 9. C, p. 61
- 10. D, p. 55

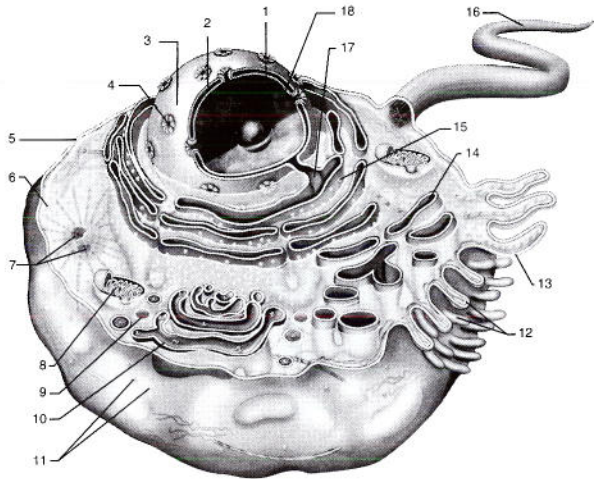
*Matching*

- 11. F, p. 40
- 12. G, p. 42
- 13. J, p. 44
- 14. C, p. 44
- 15. A, p. 47
- 16. B, p. 49
- 17. I, p. 51
- 18. H, p. 54
- 19. D, p. 54
- 20. E, p. 59

**Cell structure**

- 1. Nucleolus
- 2. Nuclear envelope
- 3. Nucleus
- 4. Nuclear pores
- 5. Plasma membrane
- 6. Cytoplasm
- 7. Centrioles
- 8. Mitochondrion
- 9. Lysosome
- 10. Golgi apparatus

11. Free ribosome
12. Microvilli
13. Cilia
14. Smooth endoplasmic reticulum
15. Ribosome
16. Flagellum
17. Rough endoplasmic reticulum
18. Chromatin



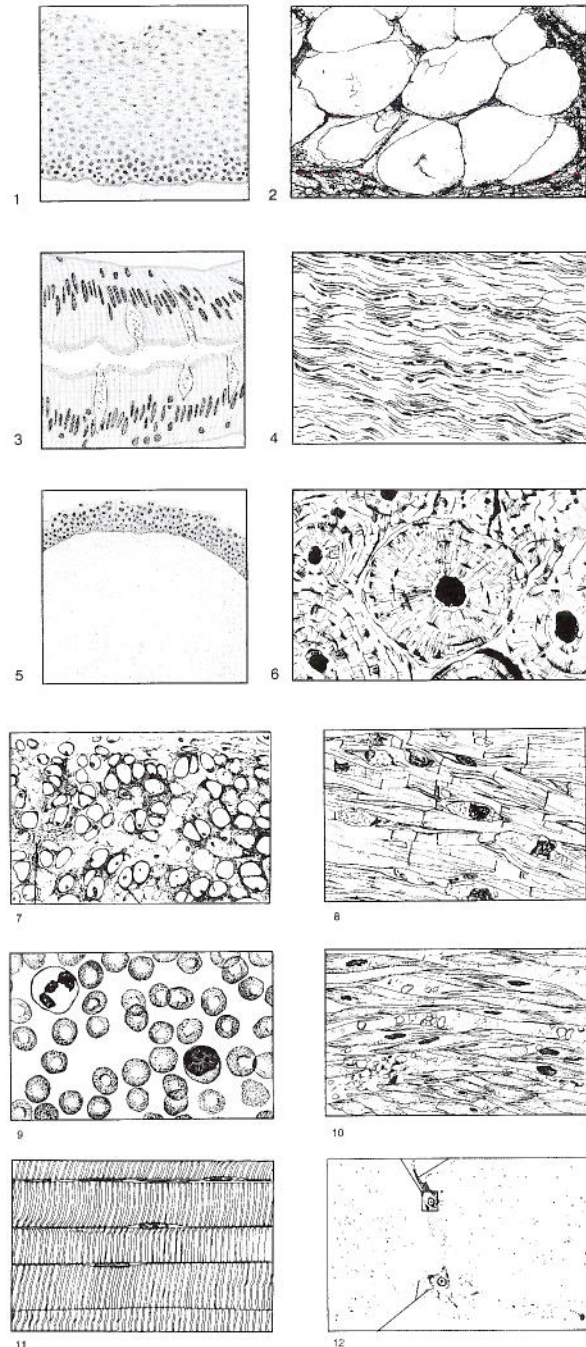
**Mitosis**

1. Interphase
2. Prophase
3. Metaphase
4. Anaphase
5. Telophase
6. Daughter cells (interphase)



**Tissues**

1. Stratified squamous epithelium
2. Adipose tissue
3. Simple columnar epithelium
4. Dense fibrous connective tissue
5. Stratified transitional epithelium
6. Bone tissue
7. Cartilage
8. Cardiac muscle
9. Blood
10. Smooth muscle
11. Skeletal muscle
12. Nervous tissue





**CHAPTER 4  
ORGAN SYSTEMS OF THE BODY**

**Matching**

*Group A*

1. A, p. 72
2. E, p. 72
3. D, p. 74
4. B, p. 74
5. C, p. 76

*Group B*

6. F, p. 76
7. E, p. 77
8. B, p. 78
9. A, p. 78
10. C, p. 77
11. D, p. 81

**Circle the one that does not belong**

12. Mouth (the others refer to the respiratory system)
13. Rectum (the others refer to the reproductive system)
14. Pancreas (the others refer to the circulatory system)
15. Pineal (the others refer to the urinary system)
16. Joints (the others refer to the muscular system)
17. Pituitary (the others refer to the nervous system)
18. Tendons (the others refer to the skeletal system)
19. Appendix (the others refer to the endocrine system)
20. Thymus (the others refer to the integumentary system)
21. Trachea (the others refer to the digestive system)
22. Liver (the others refer to the lymphatic system)

**Fill in the missing areas**

SYSTEM	ORGANS	FUNCTIONS
		23. Protection, regulation of body temperature, synthesis of chemicals and hormones, serves as a sense organ
	24. Bones, joints	
		25. Movement, maintains body posture, produces heat
26. Nervous		
	27. Pituitary, thymus, pineal, adrenal, hypothalamus, thyroid, pancreas, parathyroid, ovaries, testes	
		28. Transportation, immunity
	29. Lymph nodes, lymph vessels, thymus, spleen, tonsils	
30. Urinary		
	31. Mouth, pharynx, esophagus, stomach, small and large intestine, rectum, anal canal, teeth, salivary glands, tongue, liver, gallbladder, pancreas, appendix	
32. Respiratory		
	33. a. Gonads—testes and ovaries	
	b. Accessory organs, ducts, and glands (p. 73)	

**Unscramble the words**

- 34. Heart
- 35. Pineal
- 36. Nerve
- 37. Esophagus
- 38. Nervous

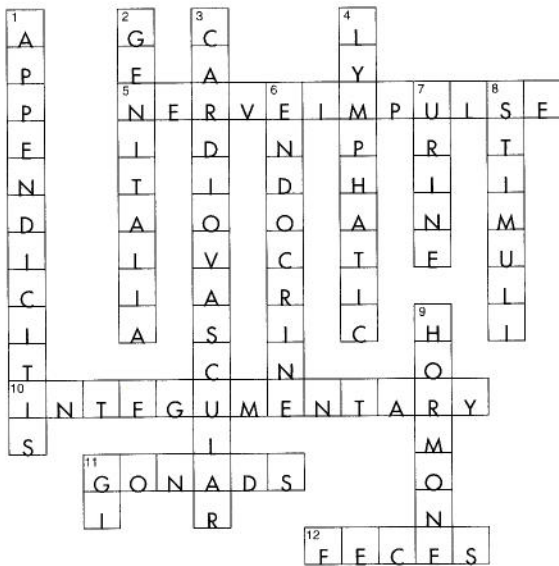
**Applying what you know**

- 39. Endocrinology (endocrine system); gynecology (reproductive system)
- 40. The skin protects the underlying tissue against invasion by harmful bacteria. With a large percentage of Brian's skin destroyed, he was vulnerable to bacteria, and so he was placed in the cleanest environment possible—isolation. Jenny is required to wear special attire so that the risk of her bringing bacteria to the patient is reduced.

**41. WORD FIND**

Y R A T N E M U G E T N I R F  
H N E R V O U S K I R J M G T  
L Y M P H A T I C I S Y Y U I  
B N X Y R O T A L U C R I C W  
P E L R E O M J M S O M M P S  
C C W M A N D L A T E L E K S  
R R K E M L I U A A V V U K N  
D K X P D J U R C J I R Q E M  
C D B V C V I C C T T K W C X  
X R Q Q D P H C S O I X P A Z  
M F M U S Y D E V U D V Y K E  
U E S E C Z G T Q D M N E K O  
P Y R A N I R U C T C N E W H  
N H T N D E P S I X A Q O I E

**Crossword**



**Check your knowledge**

*Multiple choice*

- 1. D, p. 76
- 2. C, p. 77
- 3. C, p. 81
- 4. B, p. 71
- 5. D, p. 72
- 6. A, p. 72
- 7. B, p. 78
- 8. A, p. 75
- 9. A, p. 76
- 10. C, p. 71

*Matching*

- 11. C, p. 72
- 12. D, p. 76
- 13. H, p. 76
- 14. G, p. 81
- 15. B, p. 78
- 16. F, p. 78
- 17. I, p. 82
- 18. E, p. 77
- 19. J, p. 74
- 20. A, p. 76

**CHAPTER 5  
THE INTEGUMENTARY SYSTEM AND  
BODY MEMBRANES**

**Select the best answer**

- 1. B, p. 90
- 2. D, p. 91
- 3. C, p. 91
- 4. A, p. 90
- 5. B, p. 90
- 6. D, p. 91
- 7. C, p. 91
- 8. C, p. 91

**Matching**

*Group A*

- 9. D, p. 92
- 10. A, p. 92
- 11. B, p. 93
- 12. C, p. 93
- 13. E, p. 92

*Group B*

- 14. A, p. 93
- 15. D, p. 93
- 16. E, p. 93
- 17. C, p. 94
- 18. B, p. 94

**Select the correct term**

- 19. A, p. 93
- 20. B, p. 94
- 21. B, p. 94
- 22. A, p. 93
- 23. A, p. 93
- 24. B, p. 94
- 25. B, p. 94
- 26. B, p. 94
- 27. B, p. 94
- 28. A, p. 93 (Fig. 5-3)

**Fill in the blanks**

- 29. Protection, temperature regulation, and sense organ activity, p. 99
- 30. Melanin, p. 93
- 31. Lanugo, p. 95
- 32. Hair papillae, p. 95
- 33. Lunula, p. 96
- 34. Arrector pili, p. 95
- 35. Light touch, p. 96
- 36. Eccrine, p. 97
- 37. Apocrine, p. 97
- 38. Sebum, p. 97

**Circle the correct answer**

- 39. Will not, p. 101
- 40. Will, p. 101
- 41. Will not, p. 101
- 42. 11, p. 100
- 43. Third, p. 101

**Unscramble the words**

- 44. Epidermis
- 45. Keratin
- 46. Hair
- 47. Lanugo
- 48. Dehydration
- 49. Third degree

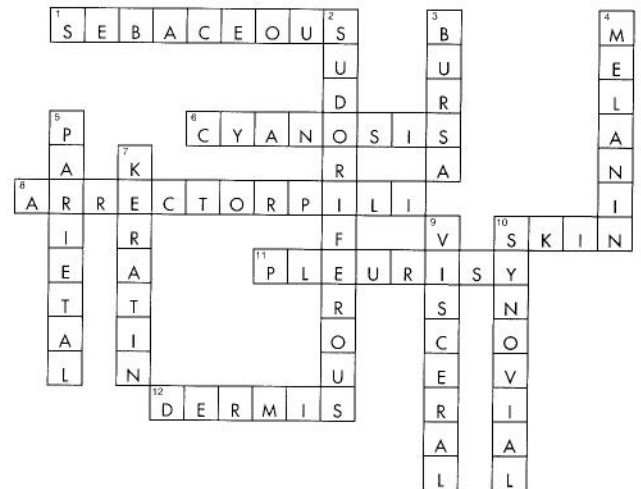
**Applying what you know**

- 50. 46
- 51. Pleurisy
- 52. Fingerprints

53. WORD FIND



**Crossword**



**Check your knowledge**

*Multiple choice*

- 1. A, p. 91
- 2. B, p. 93
- 3. A, p. 94
- 4. D, p. 93
- 5. B, p. 94
- 6. D, p. 95
- 7. B, p. 96
- 8. B, p. 96
- 9. C, p. 97
- 10. B, p. 97

*Matching*

- 11. C, p. 92
- 12. D, p. 90
- 13. B, p. 91
- 14. G, p. 91

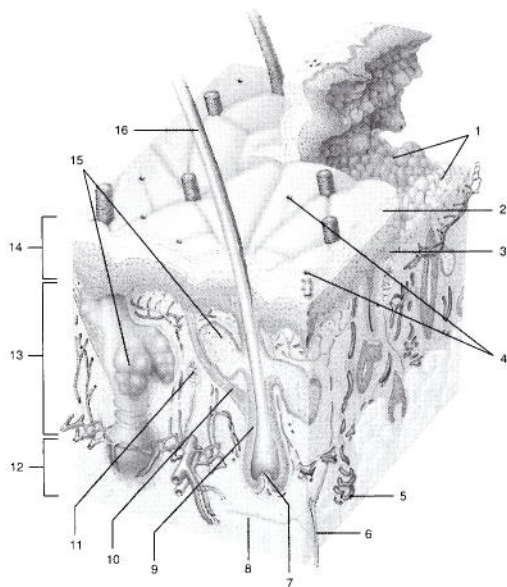
15. I, p. 91
16. H, p. 93
17. J, p. 95
18. E, p. 95
19. A, p. 96
20. F, p. 97

**Completion**

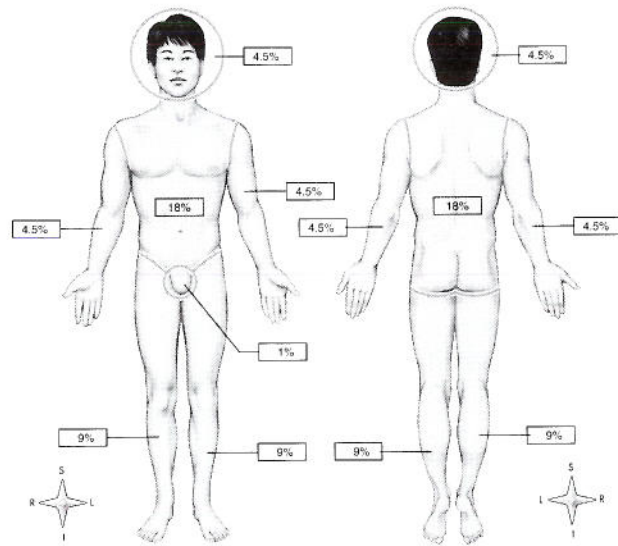
21. A, p. 99
22. H, p. 99
23. B, p. 91
24. F, p. 91
25. I, p. 101
26. E, p. 101
27. G, p. 101
28. D, p. 101
29. J, p. 97
30. C, p. 97

**Longitudinal section of the skin**

1. Dermal papilla
2. Stratum corneum
3. Stratum germinativum
4. Openings of sweat ducts
5. Sweat gland
6. Cutaneous nerve
7. Papilla of hair
8. Lamellar (Pacini) corpuscle
9. Hair follicle
10. Arrector muscle
11. Tactile (Meissner) corpuscle
12. Subcutaneous tissue
13. Dermis
14. Epidermis
15. Sebaceous (oil) gland
16. Hair shaft



**“Rule of Nines” for estimating skin surface burned**



**CHAPTER 6  
THE SKELETAL SYSTEM**

**Fill in the blanks**

1. 4, p. 110
2. Medullary cavity, p. 110
3. Articular cartilage p. 110
4. Endosteum, p. 111
5. Hemopoiesis, p. 110
6. Red bone marrow, p. 110
7. Periosteum, p. 110
8. Elderly white females, p. 115
9. Calcium, p. 110
10. Move, p. 110

**Matching**

**Group A**

11. D, p. 111
12. B, p. 111
13. E, p. 111
14. A, p. 112
15. C, p. 112

**Group B**

16. D, p. 112
17. A, p. 112
18. E, p. 111
19. B, p. 112
20. C, p. 111

**True or false**

21. T
22. Epiphyses, not diaphyses, p. 115
23. Osteoblasts, not osteoclasts, p. 113
24. T
25. Increase, not decrease, p. 114
26. Juvenile, not adult, p. 115
27. Diaphysis, not articulation, p. 115
28. T
29. Ceases, not begins, p. 115
30. T

**Multiple choice**

31. A, p. 123
32. D, p. 117
33. A, p. 121
34. D, p. 121
35. C, p. 123
36. C, p. 126
37. D, p. 124
38. D, p. 126
39. A, p. 126
40. B, p. 117
41. A, p. 121
42. B, p. 124
43. B, p. 122
44. B, p. 124
45. C, p. 124
46. A, p. 126
47. D, p. 117
48. C, p. 121
49. C, p. 117

**Circle the one that does not belong**

50. Coxal bone (all others refer to the spine)
51. Axial (all others refer to the appendicular skeleton)
52. Maxilla (all others refer to the cranial bones)
53. Ribs (all others refer to the shoulder girdle)
54. Vomer (all others refer to the bones of the middle ear)
55. Ulna (all others refer to the coxal bone)
56. Ethmoid (all others refer to the hand and wrist)
57. Nasal (all others refer to cranial bones)
58. Anvil (all others refer to the cervical vertebra)

**Choose the correct term**

59. A, p. 127
60. B, p. 127
61. B, p. 127
62. A, p. 127
63. B, p. 127

**Matching**

64. C, p. 117

65. G, p. 122
66. J, L, M, and K, p. 126
67. N, p. 126
68. I, p. 124
69. A, p. 117
70. P, p. 126
71. D, B, p. 117
72. F, p. 117
73. H, Q, p. 124
74. O, T, p. 126
75. R, p. 117
76. S, E, p. 117

**Circle the correct answer**

77. Diarthroses, p. 128
78. Synarthrotic, p. 128
79. Diarthrotic, p. 129
80. Ligaments, p. 129
81. Articular cartilage, p. 129
82. Least movable, p. 133
83. Largest, p. 135
84. 2, p. 130
85. Mobility, p. 132
86. Pivot, p. 130

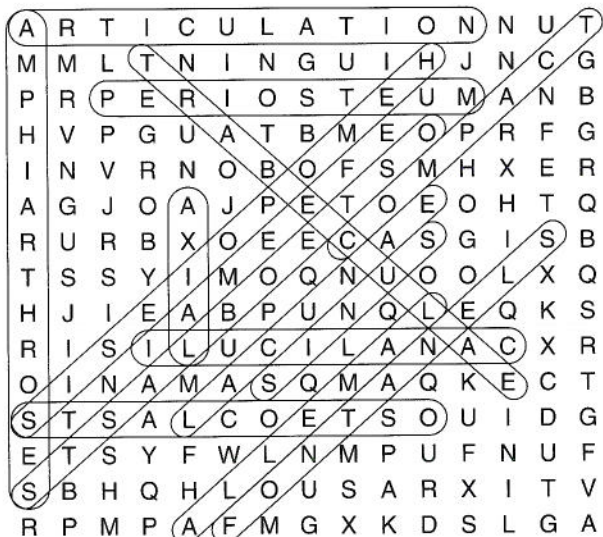
**Unscramble the words**

87. Vertebrae
88. Pubis
89. Scapula
90. Mandible
91. Phalanges
92. Pelvic girdle

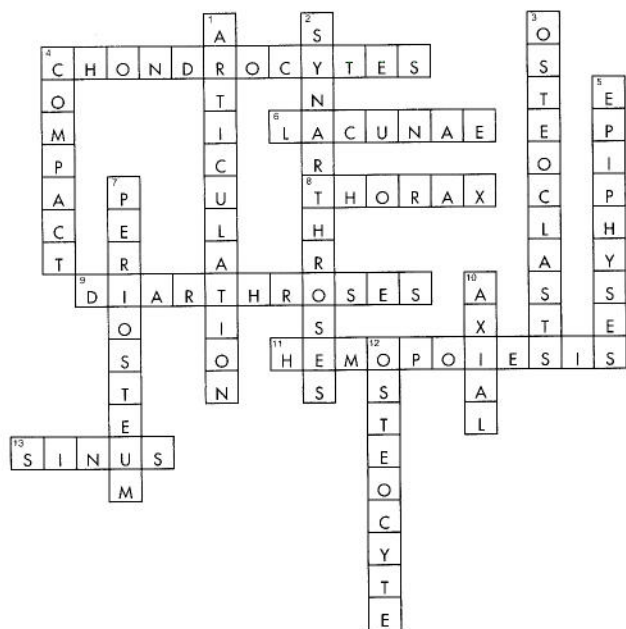
**Applying what you know**

93. The bones are responsible for the majority of our blood cell formation. The disease condition of the bones might be inhibiting the production of blood cells for Mrs. Perine.
94. Epiphyseal cartilage is present only while a child is still growing. It becomes bone in adulthood. It is particularly vulnerable to fractures in childhood and preadolescence.
95. Osteoporosis

96. WORD FIND



Crossword



Check your knowledge

Multiple choice

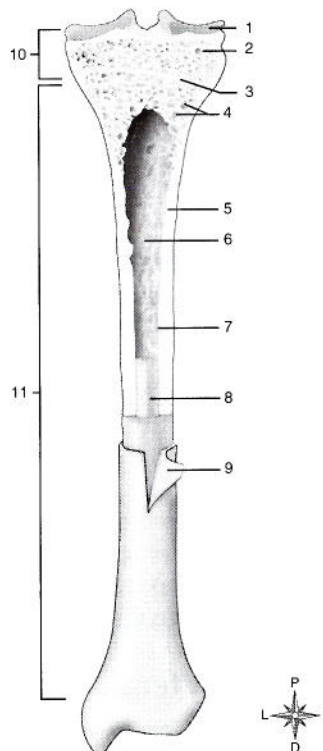
1. A, p. 110
2. C, p. 110
3. A, p. 110
4. C, p. 116
5. C, pp. 124 and 126
6. D, p. 112
7. C, p. 119
8. C, p. 122
9. D, p. 124 and Table 6-5
10. A, p. 128

Matching

11. G, p. 128
12. B, p. 110
13. I, p. 111
14. J, p. 117
15. E, p. 122
16. H, p. 117
17. A, p. 124
18. C, p. 128
19. F, p. 130
20. D, p. 132

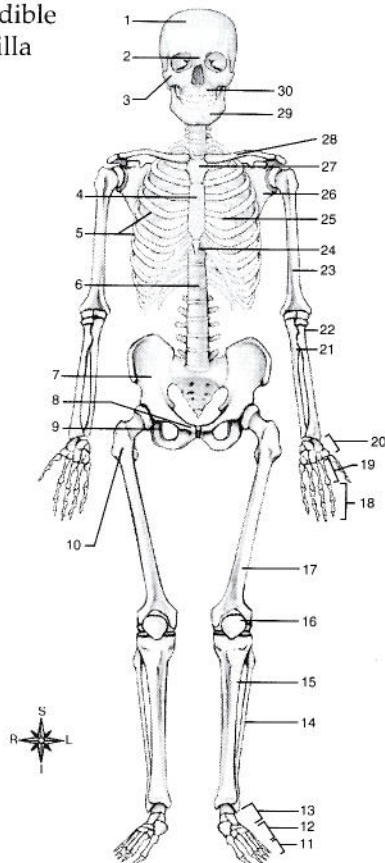
Longitudinal section of long bone

1. Articular cartilage
2. Cancellous (spongy) bone
3. Epiphyseal line
4. Red marrow cavities
5. Compact bone
6. Medullary cavity
7. Endosteum
8. Yellow marrow
9. Periosteum
10. Diaphysis
11. Epiphysis



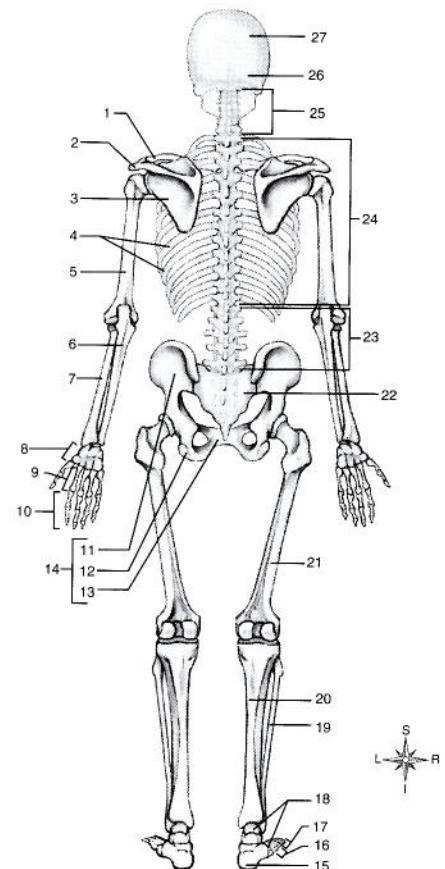
**Anterior view of skeleton**

1. Frontal bone
2. Nasal bone
3. Zygomatic bone
4. Sternum
5. Ribs
6. Vertebrae
7. Ilium
8. Pubis
9. Ischium
10. Greater trochanter
11. Phalanges
12. Metatarsals
13. Tarsals
14. Fibula
15. Tibia
16. Patella
17. Femur
18. Phalanges
19. Metacarpals
20. Carpals
21. Ulna
22. Radius
23. Humerus
24. Xiphoid process
25. Costal cartilage
26. Scapula
27. Manubrium
28. Clavicle
29. Mandible
30. Maxilla



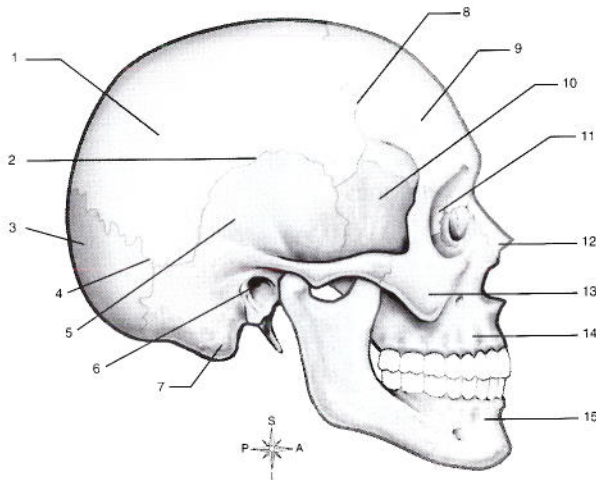
**Posterior view of skeleton**

1. Clavicle
2. Acromion process
3. Scapula
4. Ribs
5. Humerus
6. Ulna
7. Radius
8. Carpals
9. Metacarpals
10. Phalanges
11. Ilium
12. Ischium
13. Pubis
14. Coxal (hip) bone
15. Calcaneus (a tarsal bone)
16. Metatarsal bones
17. Phalanges
18. Tarsals
19. Fibula
20. Tibia
21. Femur
22. Sacrum
23. Lumbar vertebrae
24. Thoracic vertebrae
25. Cervical vertebrae
26. Occipital bone
27. Parietal bone



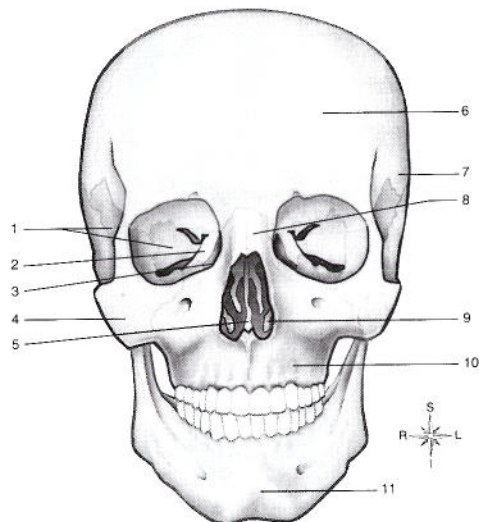
**Skull viewed from the right side**

- |                            |                    |
|----------------------------|--------------------|
| 1. Parietal bone           | 8. Coronal suture  |
| 2. Squamous suture         | 9. Frontal bone    |
| 3. Occipital bone          | 10. Sphenoid bone  |
| 4. Lambdoidal suture       | 11. Ethmoid bone   |
| 5. Temporal bone           | 12. Nasal bone     |
| 6. External auditory canal | 13. Zygomatic bone |
| 7. Mastoid process         | 14. Maxilla        |
|                            | 15. Mandible       |



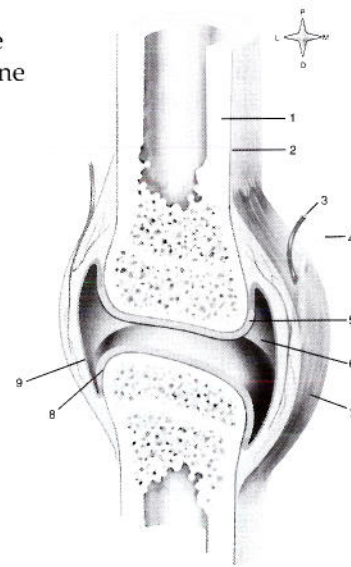
**Skull viewed from the front**

- |                   |                    |
|-------------------|--------------------|
| 1. Sphenoid bone  | 7. Parietal bone   |
| 2. Ethmoid bone   | 8. Nasal bone      |
| 3. Lacrimal bone  | 9. Inferior concha |
| 4. Zygomatic bone | 10. Maxilla        |
| 5. Vomer          | 11. Mandible       |
| 6. Frontal bone   |                    |



**Structure of a diarthrotic joint**

1. Bone
2. Periosteum
3. Blood vessel
4. Nerve
5. Articular cartilage
6. Joint cavity
7. Joint capsule
8. Articular cartilage
9. Synovial membrane



**CHAPTER 7  
THE MUSCULAR SYSTEM**

**Select the correct term**

1. A and B, p. 142
2. B, p. 142
3. C, p. 142
4. C, p. 142
5. A, p. 142
6. B, p. 142
7. C and B, p. 142
8. A, p. 142
9. C, p. 142
10. C, p. 142

**Matching**

*Group A*

11. D, p. 143
12. B, p. 143
13. A, p. 143
14. E, p. 143
15. C, p. 143

*Group B*

16. E, p. 143
17. C, p. 143
18. B, p. 143
19. A, p. 143
20. D, p. 143



**Fill in the blanks**

21. Pulling, p. 145
22. Insertion, p. 145
23. Insertion, origin, p. 145
24. Prime mover, p. 146
25. Antagonists, p. 146
26. Synergist, p. 146
27. Tonic contraction, p. 146
28. Muscle tone, p. 146
29. Hypothermia, p. 147
30. ATP, p. 147

**True or false**

31. Neuromuscular junction, p. 148
32. T
33. T
34. Oxygen debt, p. 147
35. "All or none," p. 149
36. Lactic acid, p. 147
37. T
38. T
39. Skeletal muscle, p. 148
40. T

**Circle the correct answer**

41. A, p. 149
42. B, p. 149
43. B, p. 150
44. C, p. 150
45. D, p. 150
46. A, p. 149
47. B, p. 149
48. C, p. 149
49. B, p. 150
50. D, p. 150

**Circle the correct answer**

51. A, p. 151
52. D, p. 152
53. C, p. 152
54. A, p. 152
55. D, p. 152
56. C, p. 152

**Select the best choice or choices**

57. C, p. 154
58. F, A, and D, pp. 154 and 156
59. F and B, pp. 154 and 156
60. A, p. 154
61. C, p. 154
62. B and F, pp. 154 and 156
63. A, p. 154
64. A and D, pp. 154 and 156
65. B, p. 154

66. B, p. 154
67. A and E, p. 156
68. B, p. 156
69. D, p. 156

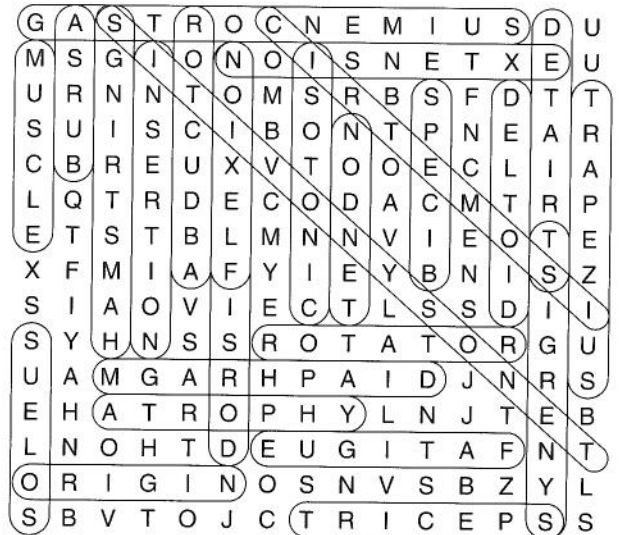
**Unscramble the words**

70. Flexion
71. Actin
72. Eversion
73. Origin
74. Sarcomere
75. Extension

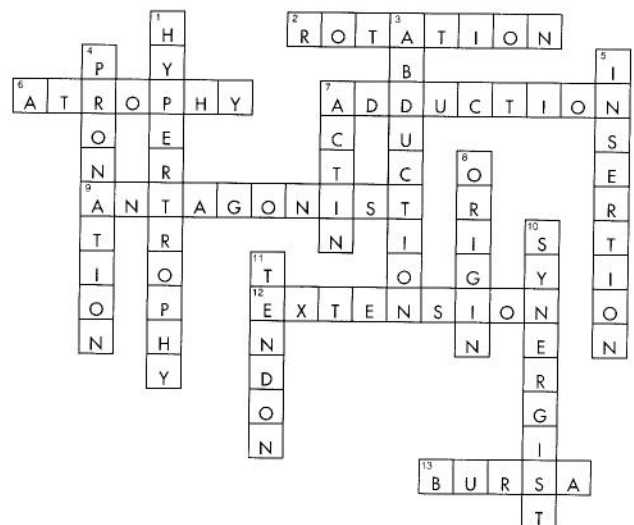
**Applying what you know**

76. Bursitis
77. Deltoid area
78. Tendon

79. WORD FIND



**Crossword**



**Check your knowledge**

*Multiple choice*

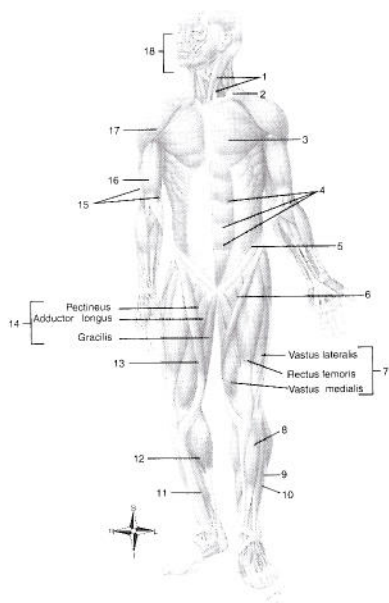
1. D, p. 150
2. A, p. 150
3. C, p. 149
4. B, p. 148
5. A, p. 146
6. B, p. 144
7. D, p. 147
8. A, p. 143
9. A, p. 142
10. C, p. 158

*True or false*

11. T
12. T
13. F, myosin, p. 143
14. F, posterior, p. 155
15. T
16. T
17. T
18. F, flexion, p. 151
19. T
20. F, smiling, p. 154

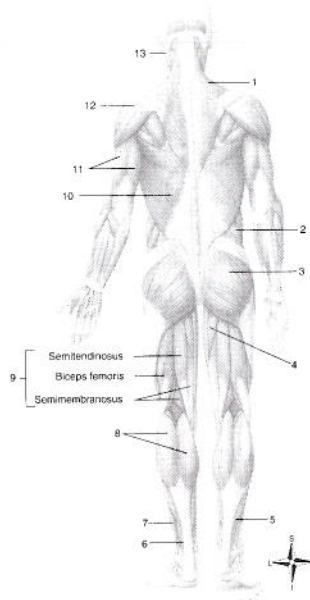
**Muscles— anterior view**

- |                               |                     |
|-------------------------------|---------------------|
| 1. Sternocleidomastoid        | 9. Peroneus longus  |
| 2. Trapezius                  | 10. Peroneus brevis |
| 3. Pectoralis major           | 11. Soleus          |
| 4. Rectus abdominis           | 12. Gastrocnemius   |
| 5. External abdominal oblique | 13. Sartorius       |
| 6. Iliopsoas                  | 14. Adductor group  |
| 7. Quadriceps group           | 15. Brachialis      |
| 8. Tibialis anterior          | 16. Biceps brachii  |
|                               | 17. Deltoid         |
|                               | 18. Facial muscles  |



**Muscles— posterior view**

- |                               |                         |
|-------------------------------|-------------------------|
| 1. Trapezius                  | 8. Gastrocnemius        |
| 2. External abdominal oblique | 9. Hamstring group      |
| 3. Gluteus maximus            | 10. Latissimus dorsi    |
| 4. Adductor magnus            | 11. Triceps brachii     |
| 5. Soleus                     | 12. Deltoid             |
| 6. Peroneus brevis            | 13. Sternocleidomastoid |
| 7. Peroneus longus            |                         |



**CHAPTER 8  
THE NERVOUS SYSTEM**

**Matching**

*Group A*

1. B, p. 168
2. C, p. 168
3. D, p. 168
4. A, p. 168

*Group B*

5. B, p. 168
6. D, p. 168
7. C, p. 168
8. A, p. 169
9. F, p. 171
10. E, p. 171

**Select the correct term**

11. A, p. 168
12. B, p. 169
13. B, p. 170
14. A, p. 168
15. A, p. 168

16. B, p. 170
17. B, p. 170
18. A, p. 168
19. B, p. 173
20. A, p. 169

### Fill in the blanks

21. Two-neuron arc, p. 171
22. Sensory, interneurons, and motor neurons, p. 171
23. Receptors, p. 172
24. Synapse, p. 172
25. Reflex, p. 173
26. Withdrawal reflex, p. 173
27. Ganglion, p. 172
28. Interneurons, p. 173
29. "Knee jerk," p. 172
30. Gray matter, p. 173

### Circle the correct answer

31. Do not, p. 174
32. Increases, p. 174
33. Excess, p. 174
34. Postsynaptic, p. 174
35. Presynaptic, p. 174
36. Neurotransmitter, p. 176
37. Communicate, p. 174
38. Specifically, p. 176
39. Sleep, p. 176
40. Pain, p. 176

### Circle the correct answer

41. E, p. 176
42. D, p. 177
43. A, p. 177
44. E, p. 179
45. E, p. 179
46. D, p. 179
47. B, p. 180
48. E, p. 182
49. B, p. 181
50. D, p. 181
51. D, p. 179
52. B, p. 180
53. A, p. 182
54. D, p. 180
55. C, p. 180

### True or false

56. 17 to 18 inches, p. 183
57. Bottom of the first lumbar vertebra, p. 183
58. Lumbar punctures, p. 187
59. Spinal tracts, p. 184
60. T
61. One general function, p. 184
62. Anesthesia, p. 185

### Circle the one that does not belong

63. Ventricles (all others refer to meninges)
64. CSF (all others refer to the arachnoid)
65. Pia mater (all others refer to the cerebrospinal fluid)
66. Choroid plexus (all others refer to the dura mater)
67. Brain tumor (all others refer to a lumbar puncture)

68. Fill in the missing areas on the chart below.

NERVE		CONDUCT IMPULSES	FUNCTION
I	Olfactory		
II			Vision
III		From brain to eye muscles	
IV	Trochlear		
V			Sensations of face, scalp, and teeth, chewing movements
VI		From brain to external eye muscles	
VII		Sense of taste; contractions of muscles of facial expression	
VIII	Vestibulocochlear		
IX		From throat and taste buds of tongue to brain; also from brain to throat muscles and salivary glands	
X	Vagus		
XI			Shoulder movements; turning movements of head
XII	Hypoglossal		

### Select the correct term

69. A, p. 187  
 70. B, p. 189  
 71. A, p. 187  
 72. B, p. 195  
 73. B, p. 188  
 74. A, p. 187  
 75. B, p. 188  
 76. B, p. 189

### Matching

77. D, p. 189  
 78. E, p. 190  
 79. F, p. 190  
 80. B, p. 191  
 81. A, p. 190  
 82. C, p. 190

### Circle the correct answer

83. C, p. 192  
 84. B, p. 192  
 85. B, p. 193  
 86. D, p. 193  
 87. A, p. 193  
 88. A, p. 194

### Select the correct term

89. B, p. 193  
 90. A, p. 193  
 91. A, p. 193  
 92. B, p. 193  
 93. A, p. 193  
 94. B, p. 193  
 95. A, p. 193  
 96. A, p. 193  
 97. B, p. 193  
 98. B, p. 193

### Fill in the blanks

99. Acetylcholine, p. 194  
 100. Adrenergic fibers, p. 194  
 101. Cholinergic fibers, p. 194  
 102. Homeostasis, p. 194  
 103. Heart rate, p. 195  
 104. Decreased, p. 195

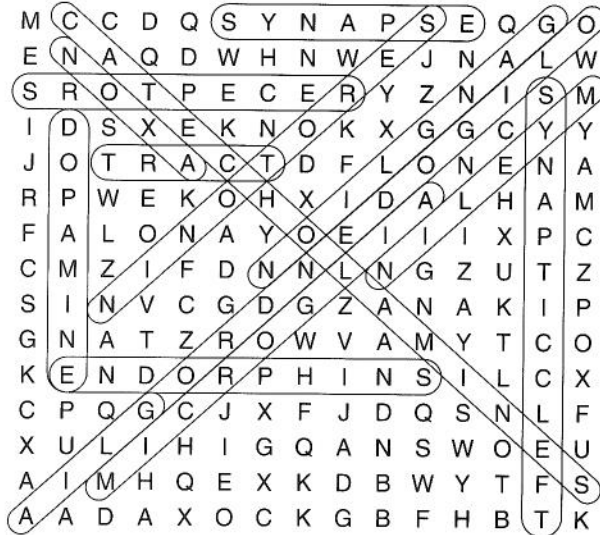
### Unscramble the words

105. Neurons  
 106. Synapse  
 107. Autonomic  
 108. Smooth muscle  
 109. Sympathetic

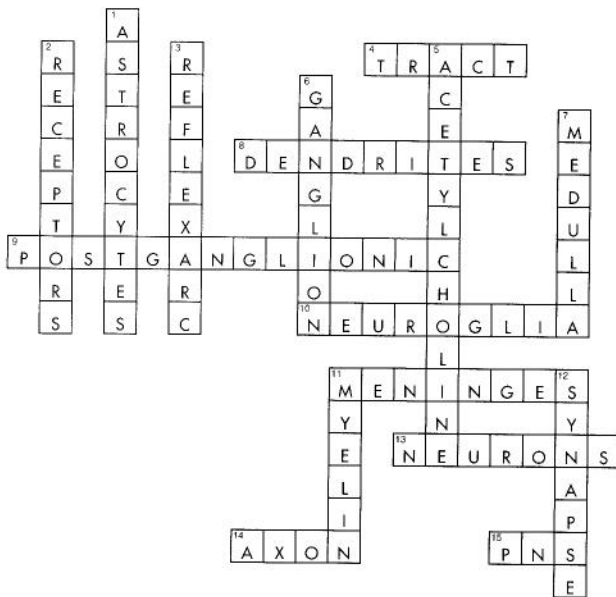
**Applying what you know**

- 110. Right
- 111. Hydrocephalus
- 112. Sympathetic
- 113. Parasympathetic
- 114. Sympathetic; No, the digestive process is not active during sympathetic control. Bill may experience nausea, vomiting, or discomfort because of this factor. See p. 193

115. WORD FIND



**Crossword**



**Check your knowledge**

*Multiple choice*

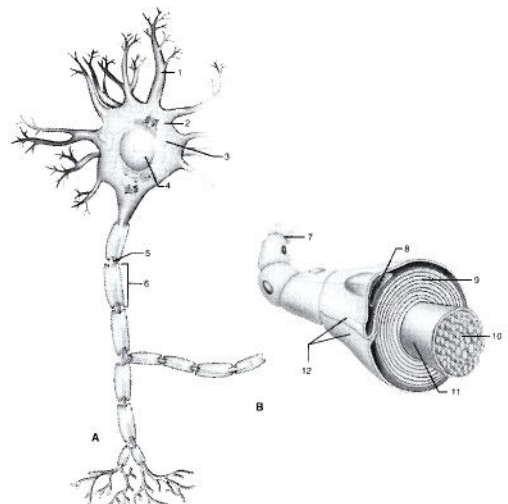
- 1. D, p. 168
- 2. B, p. 169
- 3. A, p. 170
- 4. B, p. 171
- 5. A, p. 172
- 6. D, p. 174
- 7. D, p. 176
- 8. C, p. 169
- 9. C, p. 185
- 10. D, p. 189

*Matching*

- 11. C, p. 173
- 12. A, p. 180
- 13. J, p. 182
- 14. H, p. 185
- 15. B, p. 189
- 16. I, p. 188
- 17. F, p. 191
- 18. E, p. 193
- 19. D, p. 194
- 20. G, p. 180

**Neuron**

- 1. Dendrites
- 2. Cell body
- 3. Mitochondrion
- 4. Nucleus
- 5. Axon
- 6. Schwann cell
- 7. Node of Ranvier
- 8. Nucleus of Schwann cell
- 9. Myelin sheath
- 10. Axon
- 11. Cell membrane of axon
- 12. Neurilemma (sheath of Schwann cell)



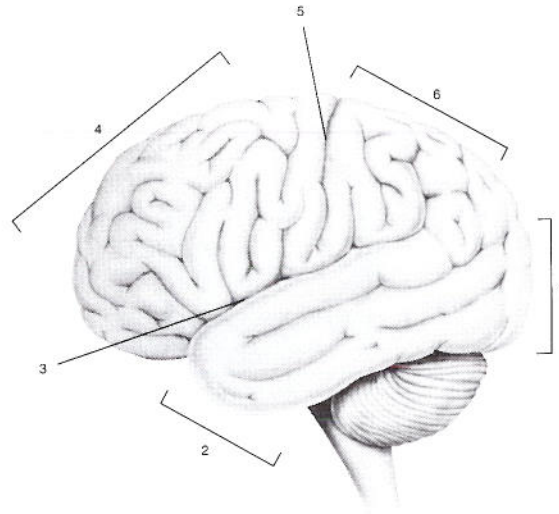
**Cranial nerves**

1. Olfactory nerve
2. Trigeminal nerve
3. Glossopharyngeal nerve
4. Hypoglossal nerve
5. Accessory nerve
6. Vagus nerve
7. Vestibulocochlear nerve
8. Facial nerve
9. Abducens nerve
10. Oculomotor nerve
11. Optic nerve
12. Trochlear nerve



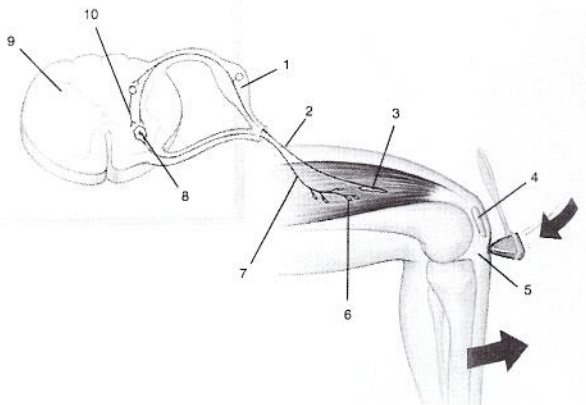
**The cerebrum**

1. Occipital lobe
2. Temporal lobe
3. Lateral fissure
4. Frontal lobe
5. Central sulcus
6. Parietal lobe



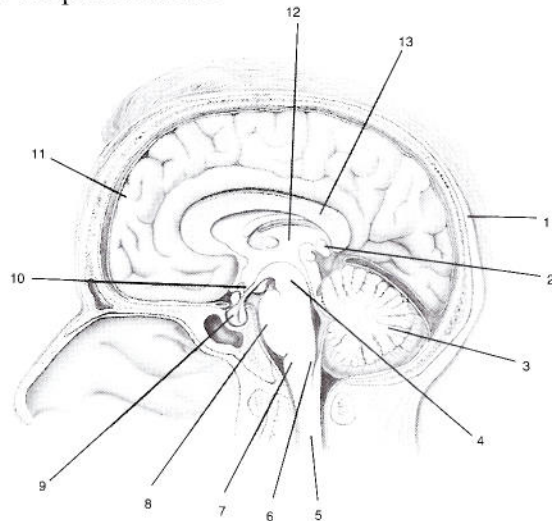
**Neural pathway involved in the patellar reflex**

1. Dorsal root ganglion
2. Sensory neuron
3. Stretch receptor
4. Patella
5. Patellar tendon
6. Quadriceps muscle
7. Motor neuron
8. Monosynaptic synapse
9. Gray matter
10. Interneuron



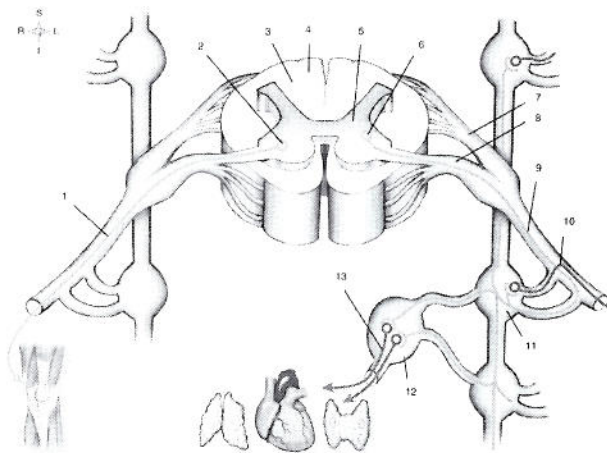
**Sagittal section of the central nervous system**

1. Skull
2. Pineal gland
3. Cerebellum
4. Midbrain
5. Spinal cord
6. Medulla
7. Reticular formation
8. Pons
9. Pituitary gland
10. Hypothalamus
11. Cerebral cortex
12. Thalamus
13. Corpus callosum



**Autonomic conduction paths**

1. Axon of somatic motor neuron
2. Cell body of somatic motor neuron
3. White matter
4. Spinal cord
5. Gray matter
6. Cell body of preganglionic neuron
7. Dorsal root
8. Ventral root
9. Axon of preganglionic sympathetic neuron
10. Axon of postganglionic neuron
11. Sympathetic ganglion
12. Collateral ganglion
13. Axon of postganglionic sympathetic neuron



**CHAPTER 9  
SENSE ORGANS**

**Matching**

1. D, p. 206
2. B, p. 206
3. A, p. 206
4. E, p. 206
5. C, p. 206

**Circle the correct answer**

6. C, p. 208
7. E, p. 209
8. B, p. 208
9. C, p. 209
10. E, p. 209
11. D, p. 210
12. A, p. 210
13. B, p. 210
14. C, p. 210
15. B, p. 211
16. D, p. 210
17. A, p. 210
18. D, p. 212

**Select the correct term**

19. B, p. 214
20. C, p. 215
21. B, p. 214
22. A, p. 214
23. C, p. 215
24. A, p. 214
25. C, p. 215
26. B, p. 214
27. B, p. 214
28. C, p. 215

**Fill in the blanks**

29. Auricle; external auditory canal, p. 214
30. Eardrum, p. 214
31. Ossicles, p. 214
32. Oval window, p. 214
33. Otitis media, p. 214
34. Vestibule, p. 215
35. Mechanoreceptors, p. 215
36. Crista ampullaris, p. 215

**Circle the correct answer**

37. Papillae, p. 216
38. Cranial, p. 218
39. Mucus, p. 218
40. Memory, p. 218
41. Chemoreceptors, p. 216

**Unscramble the words**

42. Auricle
43. Sclera
44. Papilla
45. Conjunctiva
46. Pupils

**Applying what you know**

47. External otitis
48. Cataracts
49. The eustachian tube connects the throat to the middle ear and provides a perfect pathway for the spread of infection.
50. Olfactory

51. WORD FIND

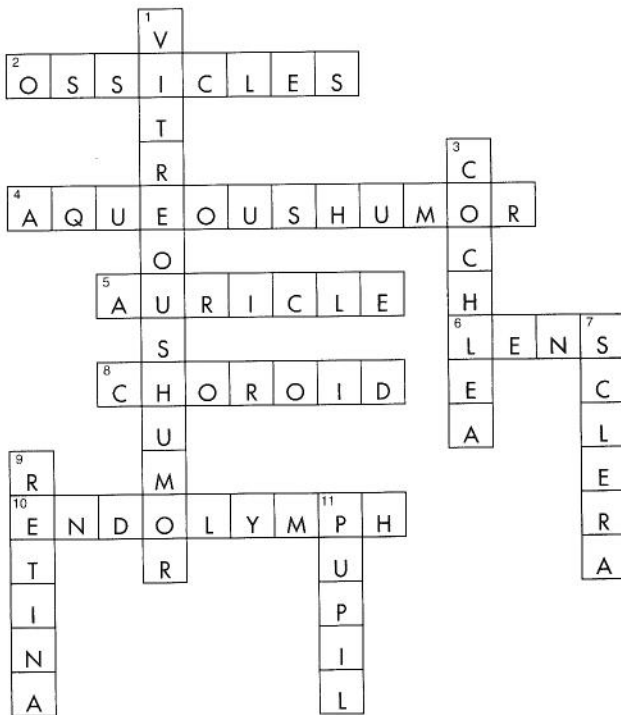


6. B, p. 215
7. D, p. 208
8. B, p. 210
9. D, p. 214
10. A, p. 210

*True or false*

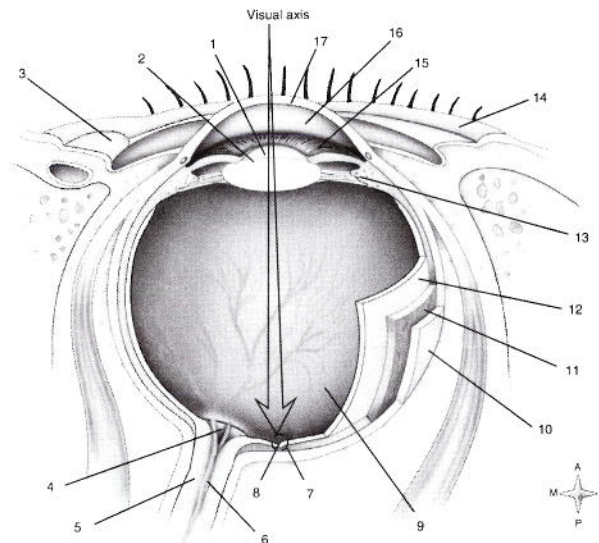
11. T, p. 205
12. F, Window of the eye, p. 208
13. T, p. 209
14. F, Cataract, p. 210
15. T, p. 209
16. T, p. 212
17. T, p. 214
18. T, p. 214
19. T, p. 216
20. T, p. 209

**Crossword**



**Eye**

1. Pupil
2. Lens
3. Lacrimal caruncle
4. Optic disc
5. Optic nerve
6. Central artery and vein
7. Macula lutea
8. Fovea
9. Posterior chamber
10. Sclera
11. Choroid
12. Retina
13. Ciliary body
14. Lower lid
15. Iris
16. Anterior chamber
17. Cornea



**Check your knowledge**

*Multiple choice*

1. A, p. 206
2. B, p. 212
3. A, p. 215
4. C, p. 212
5. B, p. 214



### Blood Typing

Recipient's blood		Reactions with donor's blood			
RBC antigens	Plasma antibodies	Donor type O	Donor type A	Donor type B	Donor type AB
None (Type O)	Anti-A Anti-B				
A (Type A)	Anti-B				
B (Type B)	Anti-A				
AB (Type AB)	(none)				

Normal blood     Agglutinated blood

- 29. C, p. 279
- 30. G, p. 280
- 31. A, p. 281
- 32. E, p. 280
- 33. E, p. 279

#### Multiple choice

- 34. D, p. 280
- 35. C, p. 280
- 36. B, p. 281
- 37. A, p. 280
- 38. B, p. 279
- 39. B, p. 285
- 40. D, p. 286
- 41. B, p. 287
- 42. B, p. 288
- 43. A, p. 288
- 44. D, p. 280
- 45. A, p. 281

## CHAPTER 12 THE CARDIOVASCULAR SYSTEM

### Fill in the blanks

- 1. CPR, p. 270
- 2. Interatrial septum, p. 270
- 3. Atria, p. 270
- 4. Ventricles, p. 270
- 5. Myocardium, p. 270
- 6. Endocarditis, p. 270
- 7. Bicuspid or mitral; tricuspid, p. 274
- 8. Pulmonary circulation, p. 274
- 9. Coronary embolism or coronary thrombosis, p. 275
- 10. Myocardial infarction, p. 275
- 11. Sinoatrial, p. 277
- 12. P; QRS complex; T, p. 279
- 13. Repolarization, p. 279

### Choose the correct term

- 14. A, p. 272
- 15. K, p. 270
- 16. G, p. 274
- 17. C, p. 271
- 18. D, p. 274
- 19. F, p. 270
- 20. H, p. 275
- 21. B, p. 276
- 22. E, p. 277
- 23. I, p. 273
- 24. J, p. 279
- 25. L, p. 270
- 26. M, p. 272

### Matching

- 27. D, p. 280
- 28. B, p. 280

### True or false

- 46. Highest in arteries, lowest in veins, p. 289
- 47. Blood pressure gradient, p. 289
- 48. Stop, p. 290
- 49. High, p. 290
- 50. Decreases, p. 290
- 51. T
- 52. T
- 53. T
- 54. Stronger will increase, weaker will decrease, p. 291
- 55. Contract, p. 292
- 56. Relax, p. 292
- 57. Artery, p. 293
- 58. T
- 59. T
- 60. Brachial, p. 293

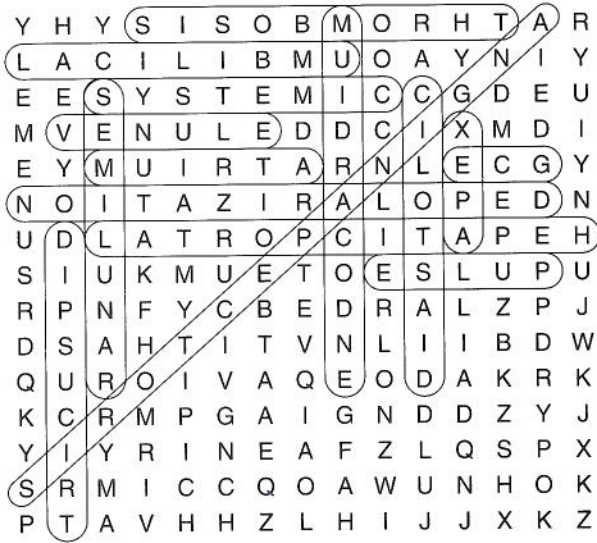
### Unscramble the words

- 61. Systemic
- 62. Venule
- 63. Artery
- 64. Pulse
- 65. Vessel

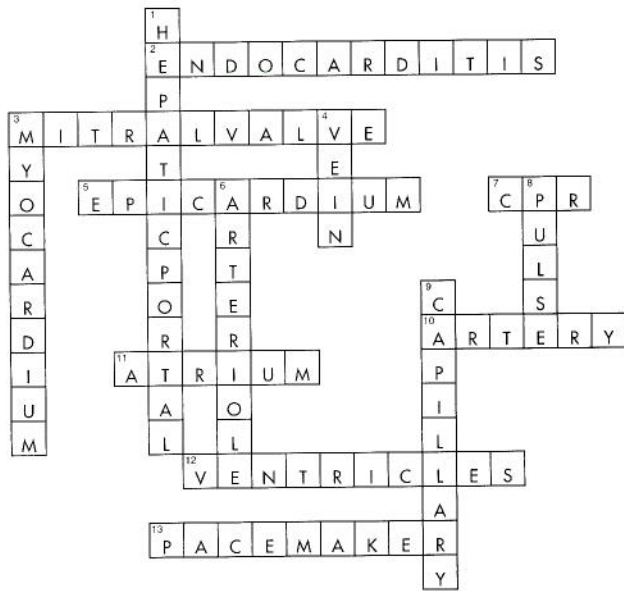
### Applying what you know

- 66. Coronary bypass surgery
- 67. Artificial pacemaker
- 68. The endocardial lining can become rough and abrasive to red blood cells passing over its surface. As a result, a fatal blood clot may be formed.
- 69. Dan may be hemorrhaging. The heart beats faster during hemorrhage in an attempt to compensate for blood loss.

70. WORD FIND



Crossword



Check your knowledge

Multiple choice

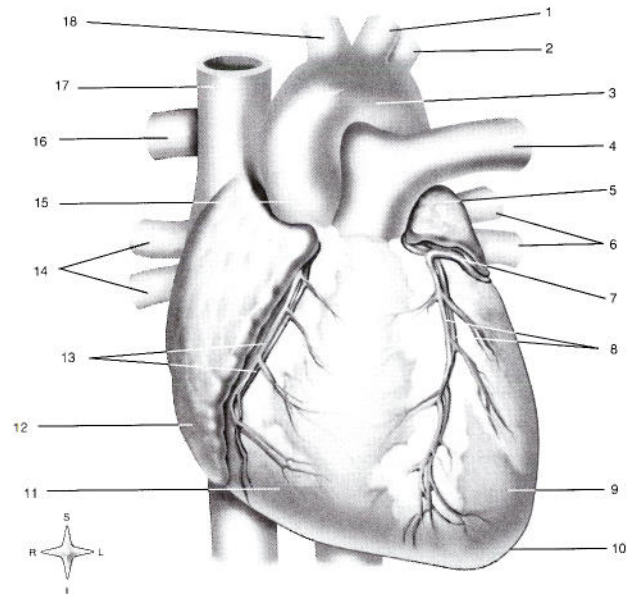
1. A, p. 270
2. C, p. 274
3. B, p. 274
4. A, p. 277
5. A, p. 280
6. D, p. 279
7. C, p. 289
8. D, p. 287
9. C, p. 276
10. C, p. 281

Matching

11. F, p. 270
12. G, p. 270
13. H, p. 272
14. I, p. 274
15. J, p. 280
16. B, p. 277
17. C, p. 270
18. A, p. 292
19. D, p. 293
20. E, p. 273

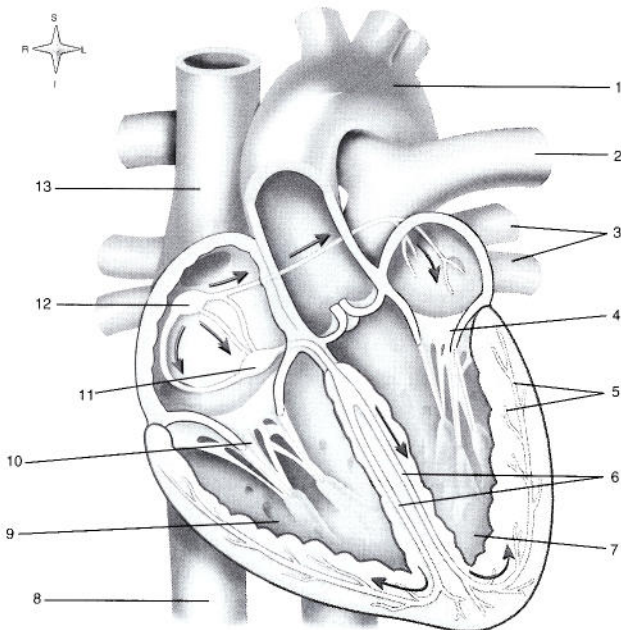
The heart

1. Left common carotid artery
2. Left subclavian artery
3. Arch of aorta
4. Left pulmonary artery
5. Left atrium
6. Left pulmonary veins
7. Great cardiac vein
8. Branches of left coronary artery and cardiac vein
9. Left ventricle
10. Apex
11. Right ventricle
12. Right atrium
13. Right coronary artery and cardiac vein
14. Right pulmonary veins
15. Ascending aorta
16. Right pulmonary artery
17. Superior vena cava
18. Brachiocephalic trunk



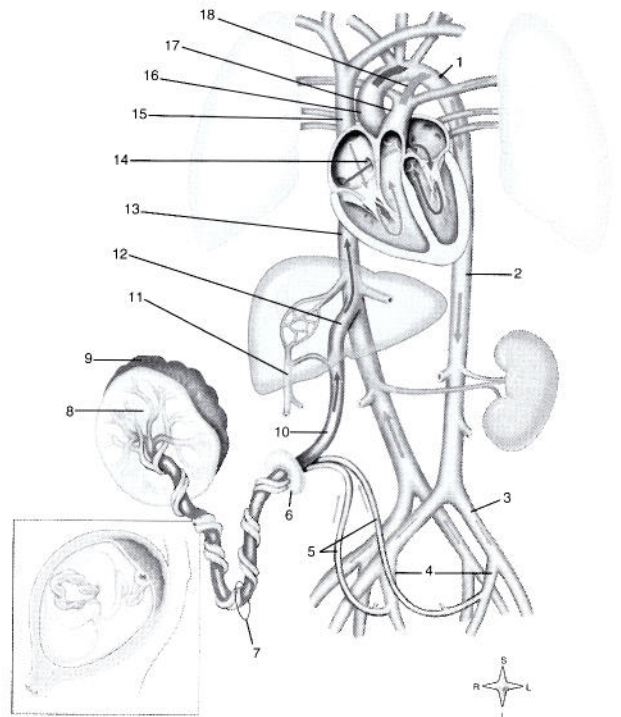
**Conduction system of the heart**

1. Aorta
2. Pulmonary artery
3. Pulmonary veins
4. Mitral (bicuspid) valve
5. Purkinje fibers
6. Right and left branches of AV bundle (bundle of His)
7. Left ventricle
8. Inferior vena cava
9. Right ventricle
10. Tricuspid valve
11. Atrioventricular (AV) node
12. Sinoatrial (SA) node or pacemaker
13. Superior vena cava



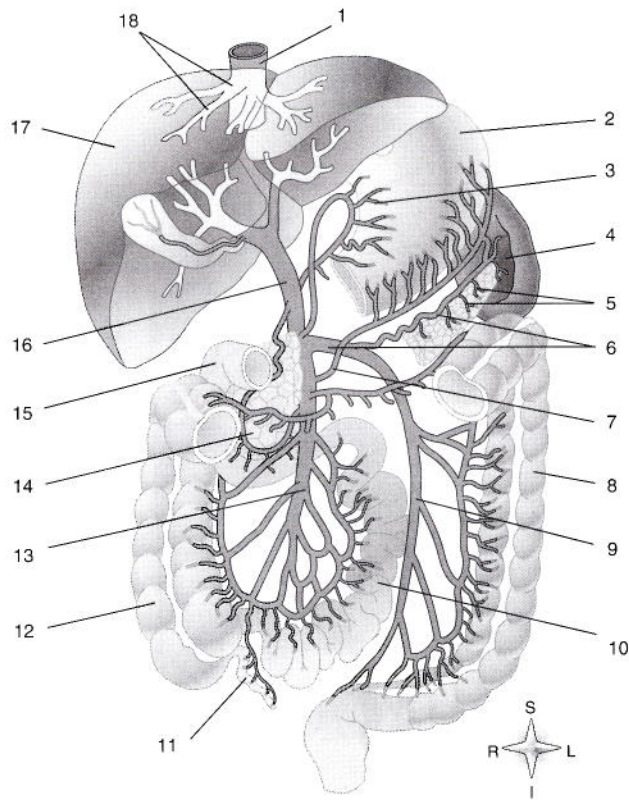
**Fetal circulation**

1. Aortic arch
2. Abdominal aorta
3. Common iliac artery
4. Internal iliac arteries
5. Umbilical arteries
6. Fetal umbilicus
7. Umbilical cord
8. Fetal side of placenta
9. Maternal side of placenta
10. Umbilical vein
11. Hepatic portal vein
12. Ductus venosus
13. Inferior vena cava
14. Foramen ovale
15. Superior vena cava
16. Ascending aorta
17. Pulmonary trunk
18. Ductus arteriosus



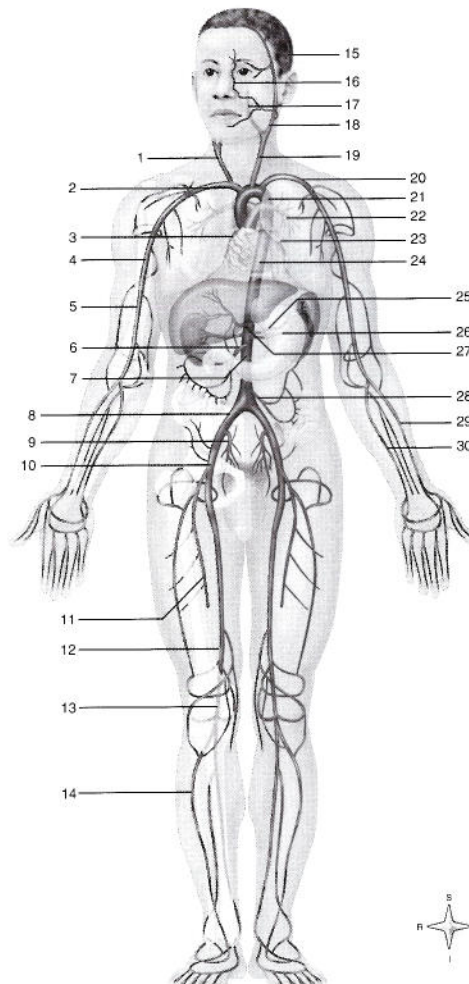
### Hepatic portal circulation

1. Inferior vena cava
2. Stomach
3. Gastric vein
4. Spleen
5. Pancreatic vein
6. Splenic vein
7. Gastroepiploic vein
8. Descending colon
9. Inferior mesenteric vein
10. Small intestine
11. Appendix
12. Ascending colon
13. Superior mesenteric vein
14. Pancreas
15. Duodenum
16. Hepatic portal vein
17. Liver
18. Hepatic veins



### Principal arteries of the body

- |                         |                         |
|-------------------------|-------------------------|
| 1. Right common carotid | 16. Facial              |
| 2. Brachiocephalic      | 17. Internal carotid    |
| 3. Right coronary       | 18. External carotid    |
| 4. Axillary             | 19. Left common carotid |
| 5. Brachial             | 20. Left subclavian     |
| 6. Superior mesenteric  | 21. Arch of aorta       |
| 7. Abdominal aorta      | 22. Pulmonary           |
| 8. Common iliac         | 23. Left coronary       |
| 9. Internal iliac       | 24. Aorta               |
| 10. External iliac      | 25. Splenic             |
| 11. Deep femoral        | 26. Renal               |
| 12. Femoral             | 27. Celiac              |
| 13. Popliteal           | 28. Inferior mesenteric |
| 14. Anterior tibial     | 29. Radial              |
| 15. Occipital           | 30. Ulnar               |

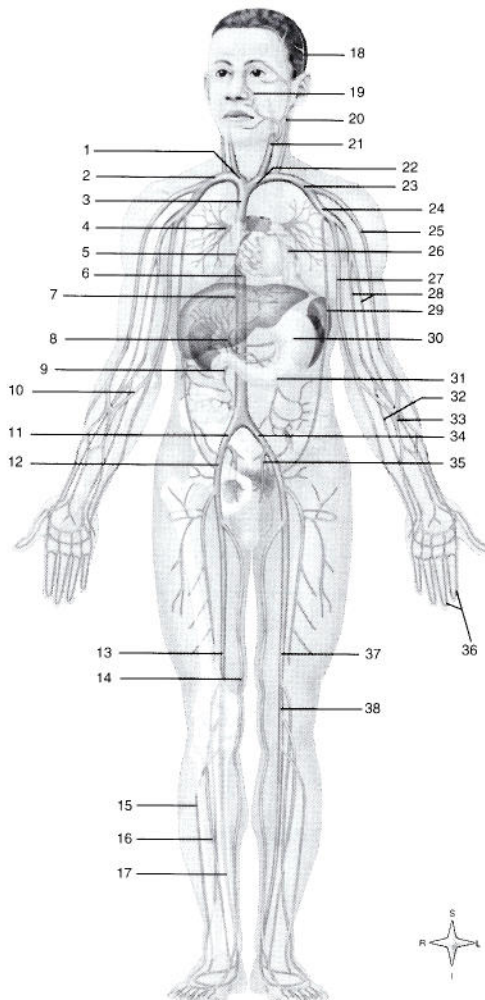
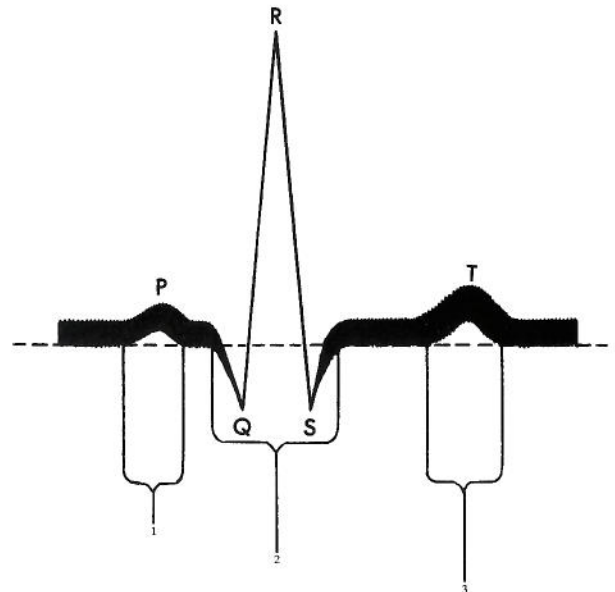


**Principal veins of the body**

- |                          |                          |
|--------------------------|--------------------------|
| 1. Right brachiocephalic | 20. External jugular     |
| 2. Right subclavian      | 21. Internal jugular     |
| 3. Superior vena cava    | 22. Left brachiocephalic |
| 4. Right pulmonary       | 23. Left subclavian      |
| 5. Small cardiac         | 24. Axillary             |
| 6. Inferior vena cava    | 25. Cephalic             |
| 7. Hepatic               | 26. Great cardiac        |
| 8. Hepatic portal        | 27. Basilic              |
| 9. Superior mesenteric   | 28. Brachial veins       |
| 10. Median cubital       | 29. Long thoracic        |
| 11. Common iliac         | 30. Splenic              |
| 12. External iliac       | 31. Inferior mesenteric  |
| 13. Femoral              | 32. Ulnar vein           |
| 14. Great saphenous      | 33. Radial vein          |
| 15. Fibular (peroneal)   | 34. Common iliac         |
| 16. Anterior tibial      | 35. Internal iliac       |
| 17. Posterior tibial     | 36. Digital veins        |
| 18. Occipital            | 37. Femoral              |
| 19. Facial               | 38. Popliteal            |

**Normal ECG deflections**

1. Atrial depolarization
2. Ventricular depolarization
3. Ventricular repolarization



**CHAPTER 13  
THE LYMPHATIC SYSTEM AND  
IMMUNITY**

**Fill in the blanks**

1. Lymph, p. 302
2. Interstitial fluid, p. 302
3. Lymphatic capillaries, p. 302
4. Right lymphatic duct; thoracic duct, p. 302
5. Cisterna chyli, p. 302
6. Lymph nodes, p. 304
7. Afferent, p. 304
8. Efferent, p. 305

**Select the correct term**

9. B, p. 307
10. C, p. 307
11. C, p. 307
12. A, p. 306
13. C, p. 307
14. A, p. 307
15. A, p. 306

**Matching**

16. C, p. 308
17. A, p. 310
18. E, p. 309
19. B, p. 310
20. D, p. 310

**Choose the correct term**

- 21. C, p. 307
- 22. D, p. 307
- 23. E, p. 313
- 24. A, p. 310
- 25. H, p. 310
- 26. B, p. 310
- 27. I, p. 310
- 28. F, p. 311
- 29. J, p. 313
- 30. G, p. 311

**Circle the one that does not belong**

- 31. Allergy (all others refer to antibodies)
- 32. Complement (all others refer to antigens)
- 33. Antigen (all others refer to monoclonal antibodies)
- 34. Complement (all others refer to allergy)
- 35. Monoclonal (all others refer to complement)

**Multiple choice**

- 36. D, p. 314
- 37. D, p. 314
- 38. C, p. 314
- 39. B, p. 306
- 40. C, p. 314
- 41. C, p. 314
- 42. E, p. 314
- 43. E, p. 314
- 44. C, p. 315
- 45. E, p. 315
- 46. E, p. 415
- 47. D, p. 318
- 48. E, p. 315
- 49. A, p. 315
- 50. B, p. 316

**Fill in the blanks**

- 51. Stem cell, p. 314
- 52. Liver and bone marrow; bone marrow, p. 314
- 53. Plasma cells, p. 315
- 54. Thymus gland, p. 315
- 55. Azidothymidine or AZT, p. 318
- 56. AIDS, p. 318
- 57. Vaccine, p. 318

**Unscramble the words**

- 58. Complement
- 59. Immunity
- 60. Clones
- 61. Interferon
- 62. Memory cells

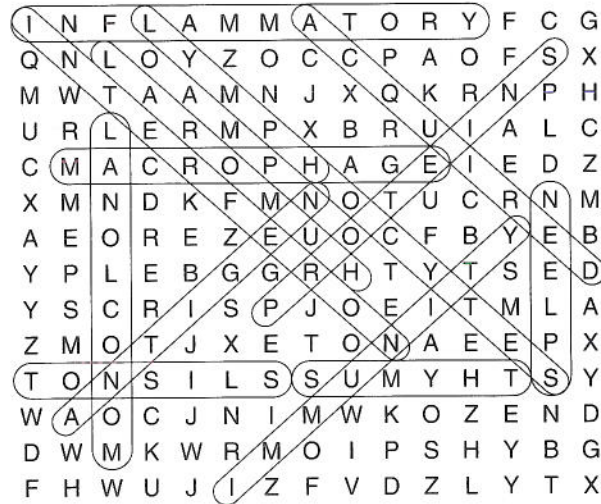
**Applying what you know**

- 63. Interferon would possibly decrease the severity of the chickenpox virus.

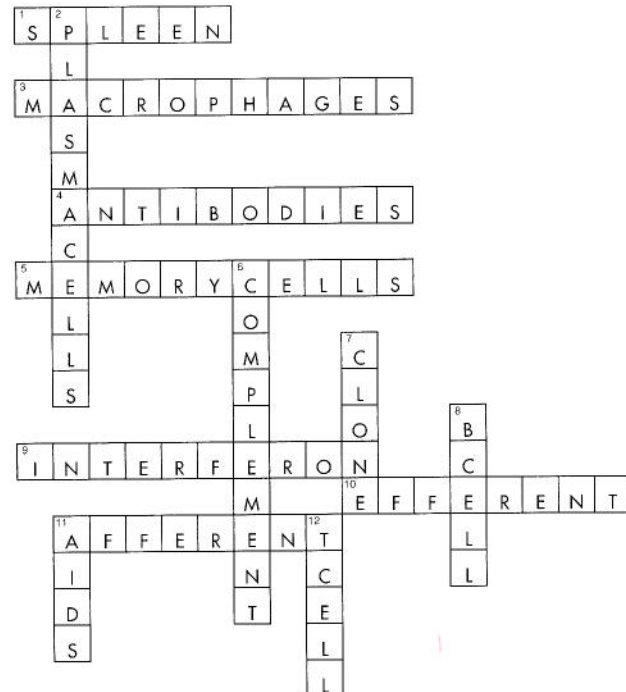
64. AIDS

65. Baby Phelps had no means of producing T cells, thus making him susceptible to several diseases. Isolation was a means of controlling his exposure to these diseases.

66. WORD FIND



**Crossword**



**Check your knowledge**

*Multiple choice*

- 1. A, p. 302
- 2. A, p. 307
- 3. D, p. 304
- 4. B, p. 304

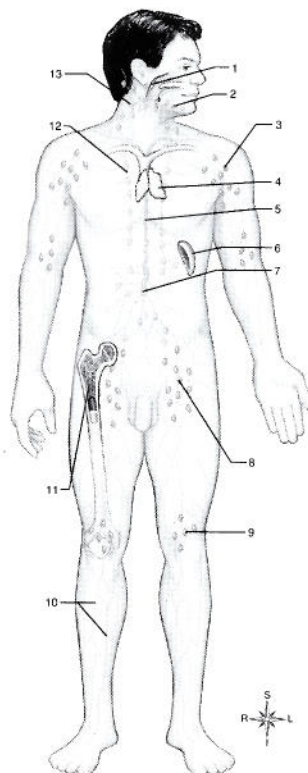
5. D, p. 307
6. B, p. 307
7. D, p. 310
8. D, p. 316
9. D, p. 308
10. C, p. 310

**Matching**

11. E, p. 305
12. D, p. 307
13. I, p. 308
14. H, p. 309
15. G, p. 310
16. B, p. 307
17. A, p. 310
18. J, p. 313
19. C, p. 315
20. F, p. 314

**Principal organs of the lymphatic system**

- |                         |                          |
|-------------------------|--------------------------|
| 1. Tonsils              | 9. Popliteal lymph nodes |
| 2. Submandibular nodes  | 10. Lymph vessels        |
| 3. Axillary lymph nodes | 11. Red bone marrow      |
| 4. Thymus               | 12. Right lymphatic duct |
| 5. Thoracic duct        | 13. Cervical lymph nodes |
| 6. Spleen               |                          |
| 7. Cisterna chyli       |                          |
| 8. Inguinal lymph nodes |                          |



**CHAPTER 14  
THE RESPIRATORY SYSTEM**

**Matching**

1. J, p. 325
2. G, p. 327
3. A, p. 326
4. I, p. 331
5. B, p. 325
6. F, p. 328
7. C, p. 328
8. H, p. 327
9. D, p. 327
10. E, p. 325

**Fill in the blanks**

11. Air distributor, p. 325
12. Gas exchanger, p. 325
13. Filters, p. 325
14. Warms, p. 325
15. Humidifies, p. 325
16. Nose, p. 326
17. Pharynx, p. 326
18. Larynx, p. 326
19. Trachea, p. 326
20. Bronchi, p. 326
21. Lungs, p. 326
22. Alveoli, p. 326
23. Diffusion, p. 326
24. Respiratory mucosa, p. 328
25. Goblet, p. 328

**Circle the one that does not belong**

26. Oropharynx (the others refer to the nose)
27. Conchae (the others refer to paranasal sinuses)
28. Epiglottis (the others refer to the pharynx)
29. Uvula (the others refer to the adenoids)
30. Larynx (the others refer to the eustachian tubes)
31. Tonsils (the others refer to the larynx)
32. Eustachian tube (the others refer to the tonsils)
33. Pharynx (the others refer to the larynx)

**Choose the correct term**

34. A, p. 328
35. B, p. 329
36. A, p. 329
37. A, p. 329
38. A, p. 328
39. B, p. 330
40. B, p. 330
41. C, p. 331

**Fill in the blanks**

42. Trachea, p. 331
43. Cartilage (C-rings), p. 332



- 44. Suffocation, p. 332
- 45. Primary bronchi, p. 332
- 46. Alveolar sacs, p. 333
- 47. Apex, p. 334
- 48. Pleura, p. 334
- 49. Pleurisy, p. 334
- 50. Pneumothorax, p. 334

**True or false**

- 51. Breathing, p. 337
- 52. Expiration, p. 337
- 53. Down, p. 338 (review Chapter 3)
- 54. Internal, p. 338
- 55. T
- 56. 1 pint, p. 341
- 57. T
- 58. Vital capacity, p. 341
- 59. T

**Circle the correct answer**

- 60. E, p. 336
- 61. C, p. 340
- 62. C, p. 340
- 63. B, p. 337
- 64. D, p. 342
- 65. D, p. 342
- 66. D, p. 342

**Matching**

- 67. E, p. 342
- 68. B, p. 343
- 69. G, p. 344
- 70. A, p. 344
- 71. F, p. 344
- 72. D, p. 344
- 73. C, p. 344

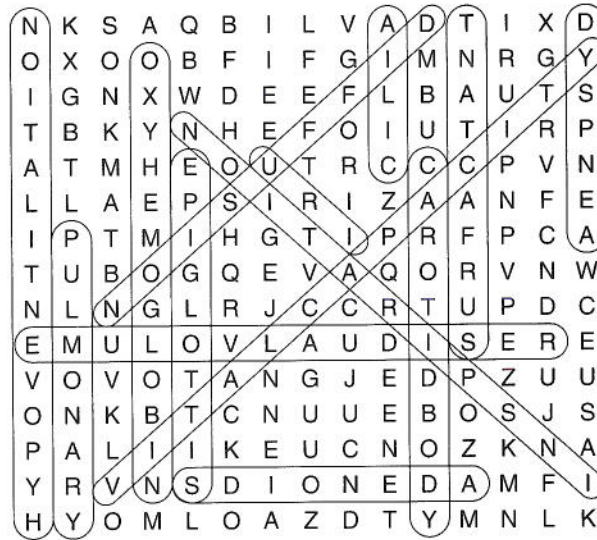
**Unscramble the words**

- 74. Pleurisy
- 75. Bronchitis
- 76. Epistaxis
- 77. Adenoids
- 78. Inspiration

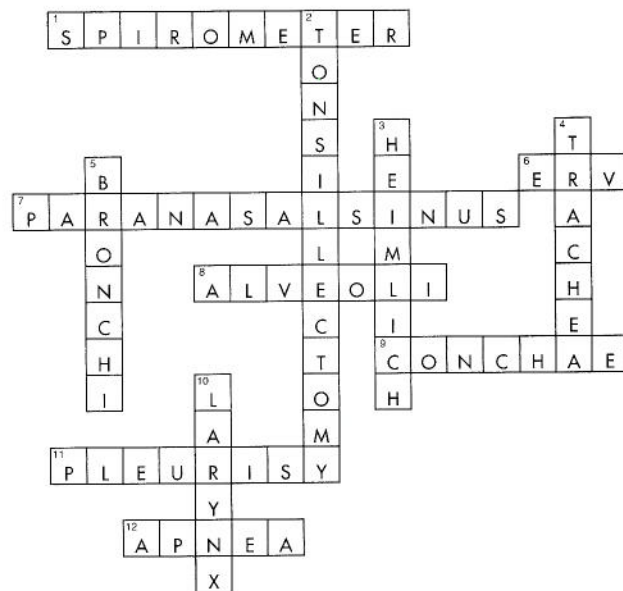
**Applying what you know**

- 79. During the day Mr. Gorski's cilia are paralyzed because of his heavy smoking. They use the time when Mr. Gorski is asleep to sweep accumulations of mucus and bacteria toward the pharynx. When he awakes, these collections are waiting to be eliminated.
- 80. Swelling of the tonsils or adenoids caused by infection may make it difficult or impossible for air to travel from the nose into the throat. The individual may be forced to breathe through the mouth.

81. WORD FIND



**Crossword**



**Check your knowledge**

*Multiple choice*

- 1. A, p. 326
- 2. B, p. 330
- 3. D, p. 325
- 4. B, p. 332
- 5. A, p. 337
- 6. D, p. 334
- 7. A, p. 336
- 8. C, p. 342
- 9. D, p. 344
- 10. B, p. 342

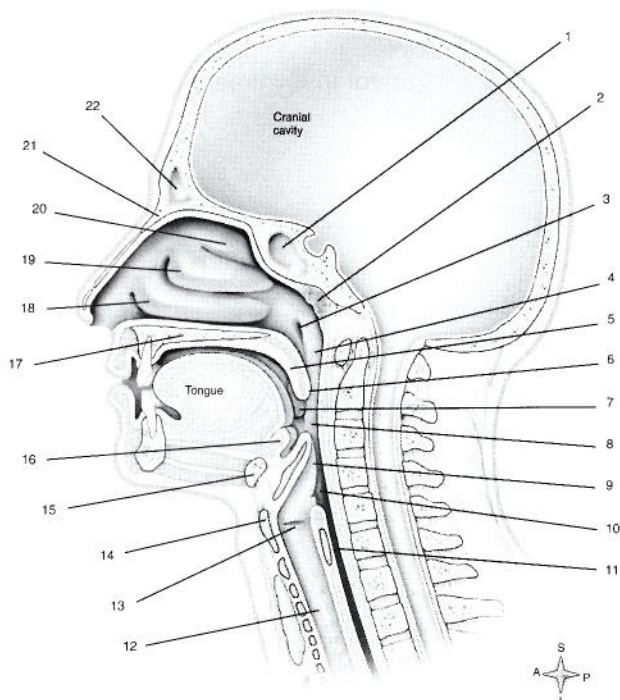


**Matching**

11. E, p. 327
12. I, p. 327
13. A, p. 328
14. G, p. 331
15. D, p. 332
16. B, p. 341
17. C, p. 343
18. H, p. 344
19. F, p. 344
20. J, p. 334

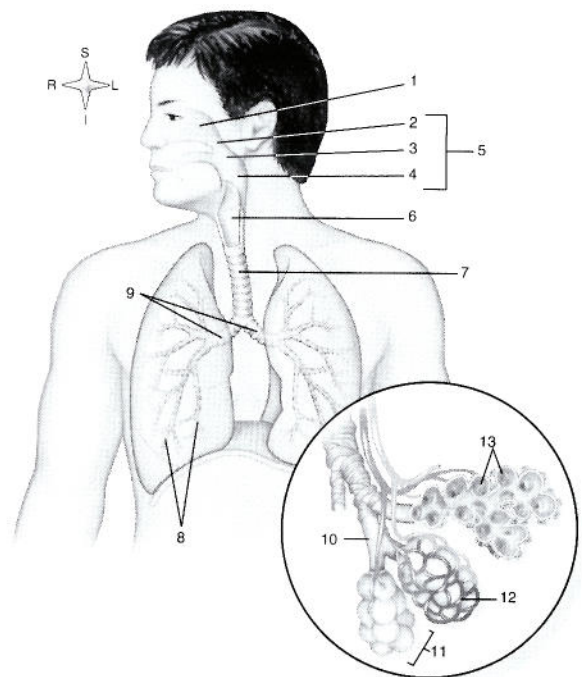
**Sagittal view of head and neck**

- |  |  |
|--|--|
| 1. Sphenoidal air sinus                  | 12. Trachea                            |
| 2. Pharyngeal tonsil (adenoids)          | 13. Vocal cords (part of larynx)       |
| 3. Opening of auditory (eustachian) tube | 14. Thyroid cartilage (part of larynx) |
| 4. Nasopharynx                           | 15. Hyoid bone                         |
| 5. Soft palate                           | 16. Lingual tonsil                     |
| 6. Uvula                                 | 17. Hard palate                        |
| 7. Palatine tonsil                       | 18. Inferior concha of ethmoid         |
| 8. Oropharynx                            | 19. Middle nasal concha of ethmoid     |
| 9. Epiglottis (part of larynx)           | 20. Superior nasal concha of ethmoid   |
| 10. Laryngopharynx                       | 21. Nasal bone                         |
| 11. Esophagus                            | 22. Frontal sinus                      |



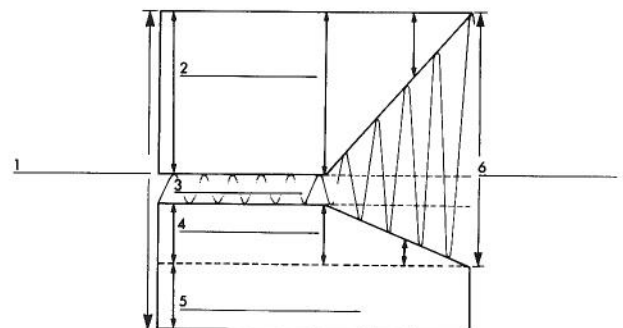
**Respiratory organs**

1. Nasal cavity
2. Nasopharynx
3. Oropharynx
4. Laryngopharynx
5. Pharynx
6. Larynx
7. Trachea
8. Bronchioles
9. Left and right primary bronchi
10. Alveolar duct
11. Alveolar sac
12. Capillary
13. Alveoli



**Pulmonary ventilation volumes**

1. Total lung capacity
2. Inspiratory reserve volume
3. Tidal volume
4. Expiratory reserve volume
5. Residual volume
6. Vital capacity



## CHAPTER 15 THE DIGESTIVE SYSTEM

### Fill in the blanks

- Gastrointestinal tract or GI tract, p. 351
- Mechanical, p. 352
- Chemical, p. 352
- Feces, p. 353
- Digestion, p. 352
- Absorption, p. 352
- Mouth; anus, p. 353
- Lumen, p. 353
- Mucosa, p. 353
- Submucosa, p. 353
- Peristalsis, p. 353
- Serosa, p. 353
- Mesentery, p. 355

### Choose the correct term

- A, p. 352
- B, p. 352
- B, p. 352
- A, p. 352
- A, p. 352
- A, p. 352
- A, p. 352
- A, p. 352
- B, p. 352
- B, p. 352
- B, p. 352
- B, p. 352
- B, p. 352

### Circle the correct answer

- E, p. 355
- C, p. 355
- E, p. 356
- D, p. 355
- B, p. 355
- C, p. 355
- D, p. 355
- D, p. 356
- D, p. 355
- A, p. 358
- C, p. 357
- A, p. 358
- A, p. 356
- B, p. 356
- C, p. 358

### Fill in the blanks

- Pharynx, p. 358
- Esophagus, p. 352
- Stomach, p. 359
- Cardiac sphincter, p. 359
- Chyme, p. 359

- Fundus, p. 360
- Body, p. 360
- Pylorus, p. 360
- Pyloric sphincter, p. 360
- Small intestine, p. 360

### Matching

- D, p. 360
- J, p. 359
- G, p. 359
- A, p. 359
- H, p. 359
- B, p. 359
- C, p. 360
- E, p. 362
- I, p. 359
- F, p. 360

### Circle the correct answer

- C, p. 360
- B, p. 360 and pp. 361 and 362
- A, p. 363
- A, p. 364
- B, p. 362
- E, p. 363
- D, p. 362
- D, p. 363 ; review Chapter 10 (hormones circulate in blood)
- B, p. 364
- C, p. 363

### True or false

- Vitamin K, p. 365
- No villi are present in the large intestine, p. 365
- Diarrhea, p. 365
- Cecum, p. 366
- Hepatic, p. 366
- Sigmoid, p. 366
- T
- T
- Parietal, p. 367
- Mesentery, p. 368

### Circle the correct answer

- B, p. 353
- D, p. 353
- C, p. 353
- C, p. 369
- C, p. 370

86. Fill in the blank areas on the chart below.

DIGESTIVE JUICES AND ENZYMES	SUBSTANCE DIGESTED (OR HYDROLYZED)	RESULTING PRODUCT
Saliva		
	1. Starch (polysaccharide)	
Gastric juice		
		2. Partially digested proteins
Pancreatic juice		
		3. Peptides and amino acids
	4. Fats emulsified by bile	
	5. Starch	
Intestinal enzymes		
	6. Peptides	
7. Sucrase		
	8. Lactose (milk sugar)	
		9. Glucose

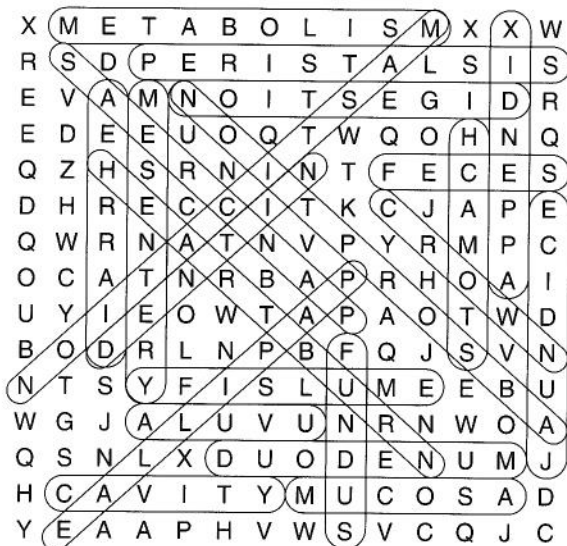
**Unscramble the words**

- 87. Bolus
- 88. Chyme
- 89. Papilla
- 90. Peritoneum
- 91. Lace apron

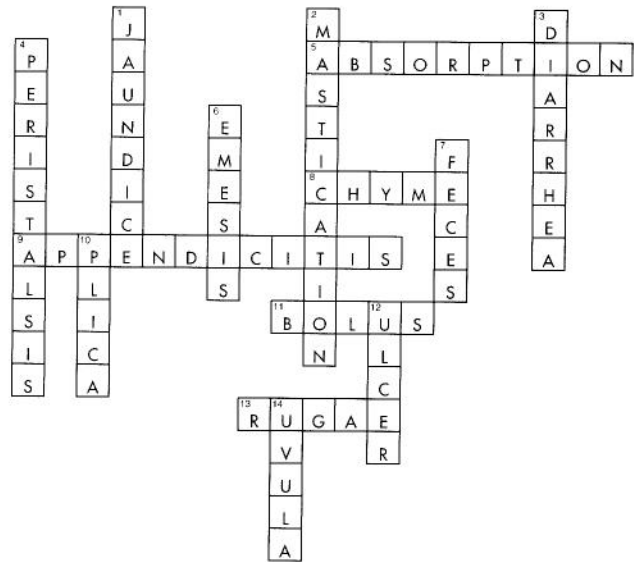
**Applying what you know**

- 92. Ulcer
- 93. Pylorospasm
- 94. Basal metabolic rate or protein-bound iodine to determine thyroid function

95. WORD FIND



**Crossword**



**Check your knowledge**

*Multiple choice*

- 1. A, p. 351
- 2. C, p. 353
- 3. A, p. 352
- 4. B, p. 356
- 5. B, p. 357
- 6. B, p. 358
- 7. B, p. 360
- 8. C, p. 359

- 9. C, p. 362
- 10. A, p. 364

**Completion**

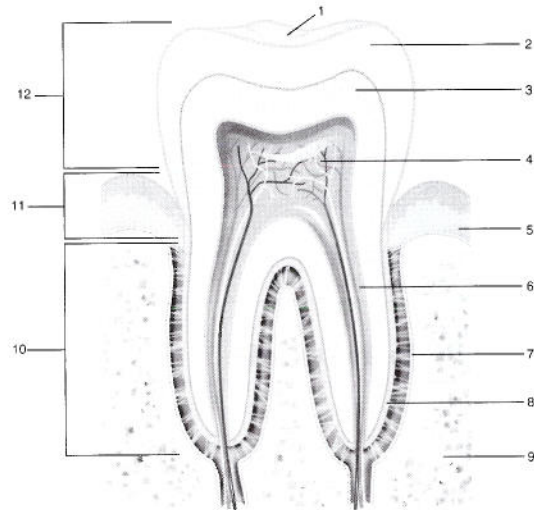
- 11. Ileocecal valve, p. 365
- 12. Sigmoid colon, p. 365
- 13. Cecum, p. 367
- 14. Mesentery, p. 368
- 15. Mechanical digestion, p. 368
- 16. Monosaccharides, p. 369
- 17. Amino acids, p. 370
- 18. Fatty acids, glycerol, p. 370
- 19. Absorption, p. 371
- 20. Maltase, sucrase, lactase, p. 369

**Digestive organs**

- 1. Parotid gland
- 2. Submandibular gland
- 3. Pharynx
- 4. Esophagus
- 5. Diaphragm
- 6. Transverse colon
- 7. Hepatic flexure
- 8. Ascending colon
- 9. Ilium
- 10. Cecum
- 11. Vermiform appendix
- 12. Rectum
- 13. Tongue
- 14. Sublingual gland
- 15. Larynx
- 16. Trachea
- 17. Liver
- 18. Stomach
- 19. Spleen
- 20. Splenic flexure
- 21. Descending colon
- 22. Sigmoid colon
- 23. Anal canal

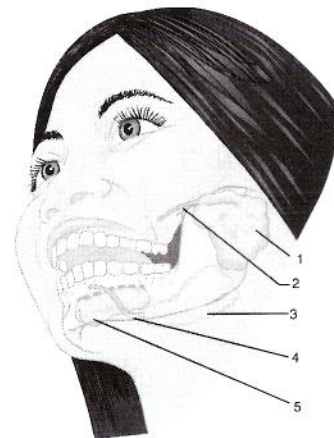
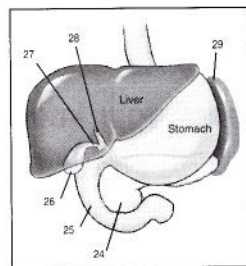
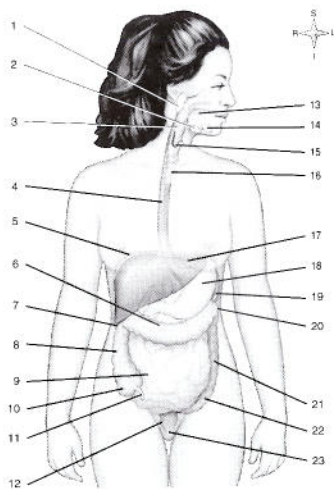
**Tooth**

- 1. Cusp
- 2. Enamel
- 3. Dentin
- 4. Pulp cavity with nerves and vessels
- 5. Gingiva
- 6. Root canal
- 7. Peridontal membrane
- 8. Cementum
- 9. Bone
- 10. Root
- 11. Neck
- 12. Crown



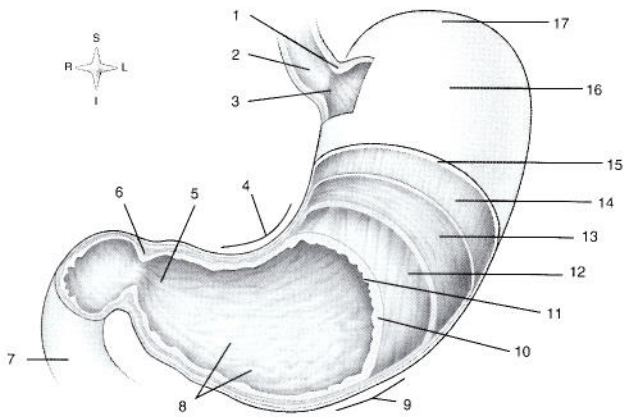
**The salivary glands**

- 1. Parotid gland
- 2. Parotid duct
- 3. Submandibular gland
- 4. Submandibular duct
- 5. Sublingual gland



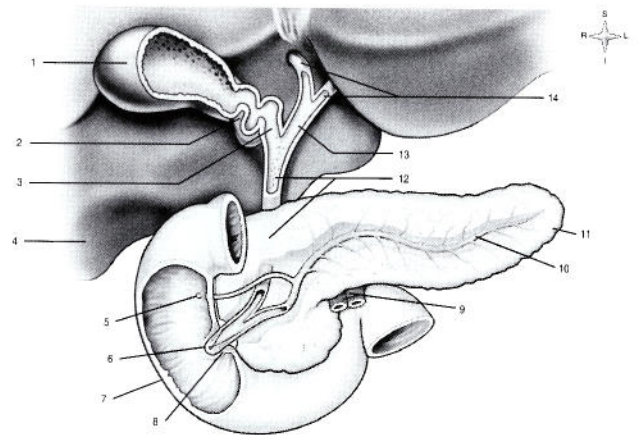
### Stomach

1. Gastroesophageal sphincter
2. Esophagus
3. Gastroesophageal opening
4. Lesser curvature
5. Pylorus
6. Pyloric sphincter
7. Duodenum
8. Rugae
9. Greater curvature
10. Submucosa
11. Mucosa
12. Oblique muscle layer
13. Circular muscle layer
14. Longitudinal muscle layer
15. Serosa
16. Body
17. Fundus



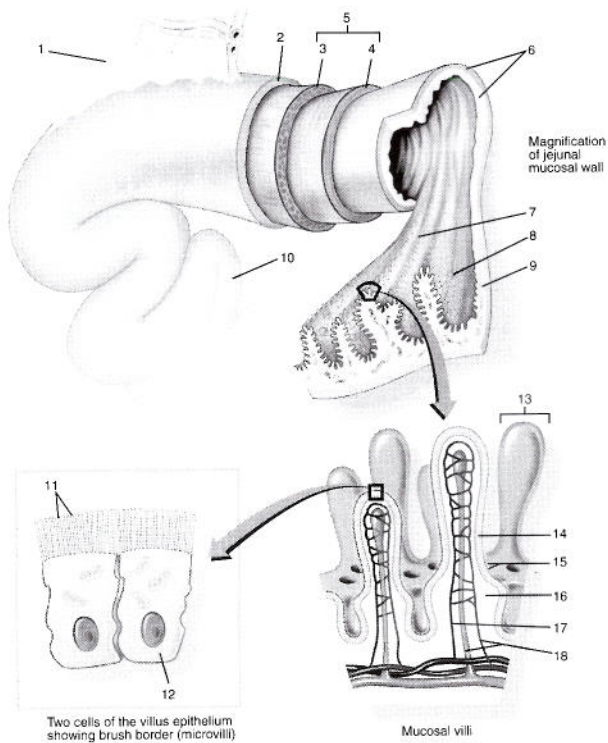
### Gallbladder and bile ducts

1. Corpus (body) of gallbladder
2. Neck of gallbladder
3. Cystic duct
4. Liver
5. Minor duodenal papilla
6. Major duodenal papilla
7. Duodenum
8. Sphincter muscles
9. Superior mesenteric artery and vein
10. Pancreatic duct
11. Pancreas
12. Common bile duct
13. Common hepatic duct
14. Right and left hepatic ducts



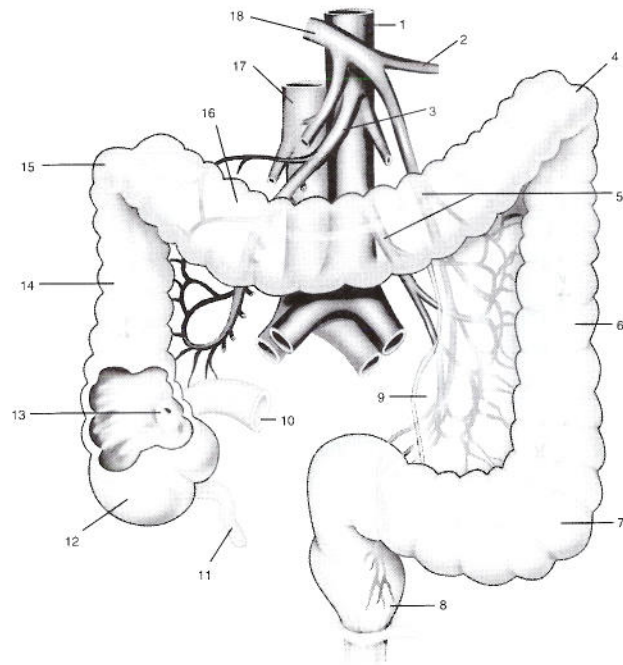
**The small intestine**

1. Mesentery
2. Serosa
3. Longitudinal muscle
4. Circular muscle
5. Muscularis
6. Submucosa
7. Plica (fold)
8. Lymph nodule
9. Mucosa
10. Segment of jejunum
11. Microvilli
12. Epithelial cell
13. Single villus
14. Mucosa
15. Microvilli
16. Submucosa
17. Lacteal (lymph capillary)
18. Artery and vein



**Large intestine**

1. Aorta
2. Splenic vein
3. Superior mesenteric artery
4. Splenic (left colic) flexure
5. Inferior mesenteric artery and vein
6. Descending colon
7. Sigmoid colon
8. Rectum
9. Mesentery
10. Ileum
11. Vermiform appendix
12. Cecum
13. Ileocecal valve
14. Ascending colon
15. Hepatic (right colic) flexure
16. Transverse colon
17. Inferior vena cava
18. Portal vein



**CHAPTER 16  
NUTRITION AND METABOLISM**

**Fill in the blanks**

1. Bile, p. 380
2. Prothrombin, p. 380
3. Fibrinogen, p. 380
4. Iron, p. 380
5. Hepatic portal vein, p. 380

**Matching**

6. B, p. 382
7. A, p. 380
8. C, p. 382
9. D, p. 384
10. E, p. 384
11. A, p. 380
12. E, p. 384
13. A, p. 381

**Circle the one that does not belong**

14. Bile (all others refer to carbohydrate metabolism)
15. Amino acids (all others refer to fat metabolism)
16. M (all other refer to vitamins)
17. Iron (all others refer to protein metabolism)
18. Insulin (all others tend to increase blood glucose)
19. Folic acid (all others are minerals)
20. Ascorbic acid (all others refer to the B-complex vitamins)

**Circle the correct answer**

21. C, p. 384
22. A, p. 384
23. C, p. 386
24. B, p. 387
25. B, p. 387
26. A, p. 387
27. C, p. 387
28. D, p. 387
29. A, p. 387

**Unscramble the words**

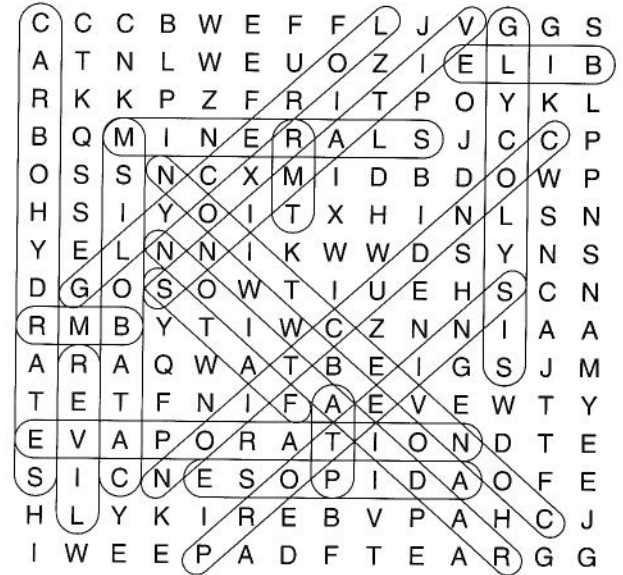
30. Liver
31. Catabolism
32. Amino
33. Pyruvic
34. Evaporation

**Applying what you know**

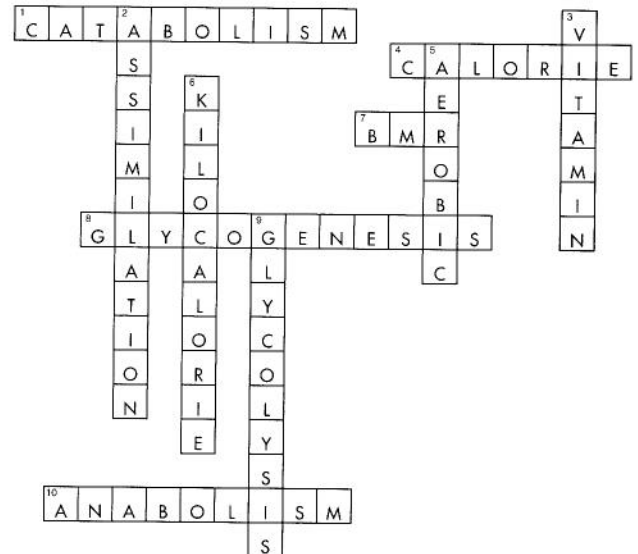
35. Weight loss; anorexia nervosa
36. Iron; meat, eggs, vegetables, and legumes

37. She was carbohydrate loading or glycogen loading which allows the muscles to sustain aerobic exercise for up to 50% longer than usual.

**38. WORD FIND**



**Crossword**



**Check your knowledge**

**Multiple choice**

1. B, p. 379
2. A, p. 381
3. C, p. 381
4. C, p. 382
5. B, p. 382

6. B, p. 382
7. A, p. 384
8. A, p. 386
9. B, p. 387
10. D, p. 380

### Completion

11. Carbohydrates, p. 380
12. Glycolysis, p. 381
13. Citric acid cycle, p. 381
14. Iodine, p. 386
15. Basal metabolic rate, p. 384
16. Total metabolic rate, p. 384
17. Hypothalamus, p. 387
18. Catabolism, p. 379
19. Anabolism, p. 379
20. A, E, D, K, p. 384

## CHAPTER 17 URINARY SYSTEM

### Multiple choice

1. E, p. 395
2. C, p. 396
3. E, p. 396
4. C, p. 396
5. E, p. 403
6. C, p. 401
7. B, p. 401
8. E, p. 396
9. C, p. 402
10. C, p. 402
11. B, p. 403 (review Chapter 10)
12. D, p. 403

### Matching

13. G, p. 396
14. I, p. 399
15. H, p. 394
16. B, p. 395
17. K, p. 396
18. F, p. 396
19. J, p. 396
20. D, p. 395
21. L, p. 396
22. C, p. 395
23. M, p. 400
24. A, p. 395

### Indicate which organ is identified

25. B, p. 404
26. C, p. 405
27. A, p. 404
28. B, p. 404
29. C, p. 405

30. C, p. 405
31. A, p. 403
32. C, p. 404
33. B, p. 404
34. A, p. 404
35. B, p. 404

### Fill in the blanks

36. Renal colic, p. 404
37. Mucous membrane, p. 404
38. Renal calculi, p. 406
39. Ultrasound, p. 406
40. Reduced, p. 405
41. Renal pelvis, p. 396
42. Semen, p. 405
43. Urinary meatus, p. 405

### Fill in the blanks

44. Micturition, p. 405
45. Urination, p. 405
46. Voiding, p. 405
47. Internal urethral, p. 405
48. Exit, p. 405
49. Striated, p. 405
50. Voluntary, p. 405
51. Emptying reflex, p. 405
52. Urethra, p. 405
53. Retention, p. 405
54. Suppression, p. 405
55. Overactive bladder, p. 406

### Unscramble the words

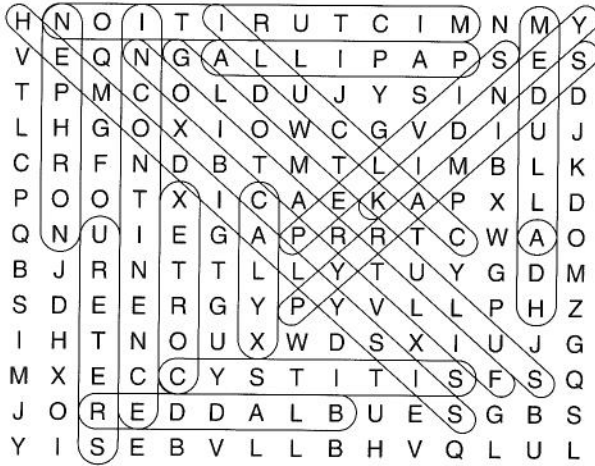
56. Calyx
57. Voiding
58. Papilla
59. Glomerulus
60. Pyramids

### Applying what you know

61. Polyuria
62. Residual urine is often the cause of repeated cystitis.
63. A high percentage of catheterized patients develop cystitis, often due to poor aseptic technique when inserting the catheter.

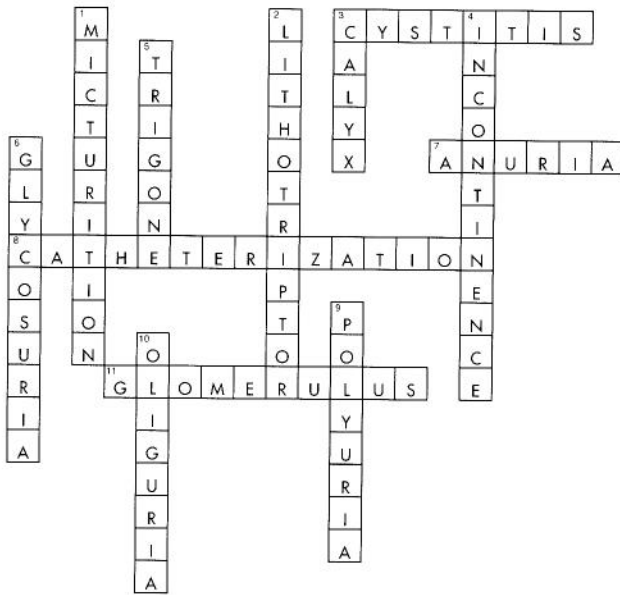


64. WORD FIND



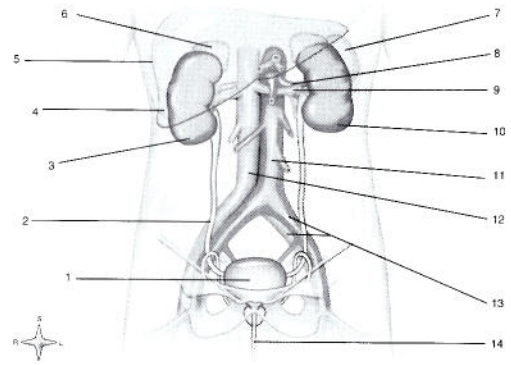
12. C, p. 396
13. F, p. 396
14. D, p. 398
15. J, p. 402
16. H, p. 400
17. A, p. 405
18. G, p. 405
19. I, p. 396
20. B, p. 395

Crossword



Urinary system

- |                    |                                  |
|--------------------|----------------------------------|
| 1. Urinary bladder | 9. Renal vein                    |
| 2. Ureter          | 10. Left kidney                  |
| 3. Right kidney    | 11. Abdominal aorta              |
| 4. Twelfth rib     | 12. Inferior vena cava           |
| 5. Liver           | 13. Common iliac artery and vein |
| 6. Adrenal gland   | 14. Urethra                      |
| 7. Spleen          |                                  |
| 8. Renal artery    |                                  |



Check your knowledge

Multiple choice

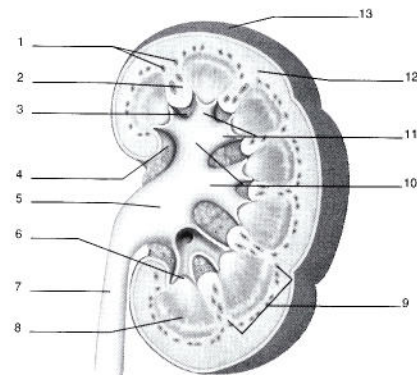
1. D, p. 395
2. B, p. 396
3. D, p. 396
4. A, p. 400
5. C, p. 402
6. C, p. 406
7. B, p. 403
8. C, p. 403
9. B, p. 404
10. A, p. 400

Matching

11. E, p. 394

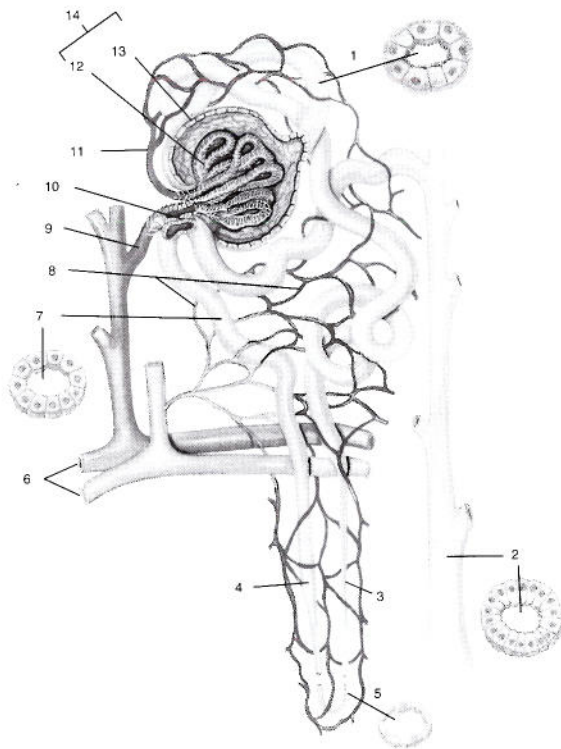
Kidney

- |                             |                       |
|-----------------------------|-----------------------|
| 1. Interlobular arteries    | 7. Ureter             |
| 2. Renal column             | 8. Medulla            |
| 3. Renal sinus              | 9. Medullary pyramid  |
| 4. Hilum                    | 10. Major calyces     |
| 5. Renal pelvis             | 11. Minor calyces     |
| 6. Renal papilla of pyramid | 12. Cortex            |
|                             | 13. Capsule (fibrous) |



**Nephron**

1. Proximal convoluted tubule
2. Collecting duct
3. Descending limb of Henle's loop
4. Ascending limb of Henle's loop
5. Descending limb of Henle's loop
6. Artery and vein
7. Distal convoluted tubule
8. Peritubular capillaries
9. Afferent arteriole
10. Juxtaglomerular (JG) apparatus
11. Efferent arteriole
12. Glomerulus
13. Bowman capsule
14. Renal corpuscle



## CHAPTER 18 FLUID AND ELECTROLYTE BALANCE

**Circle the correct answer**

1. Inside, p. 415
2. Extracellular, p. 415
3. Extracellular, p. 415
4. Lower, p. 413
5. More, p. 414
6. Decline, p. 414
7. Less, p. 414
8. Decreases, p. 414
9. 55%, p. 413
10. Fluid balance, p. 413

**Multiple choice**

11. A, p. 417
12. D, p. 417
13. A, p. 418
14. A, p. 418
15. C, p. 416
16. E, p. 416
17. D, p. 416
18. D, p. 418
19. C, p. 420
20. B, p. 420
21. D, p. 421
22. E, p. 420
23. B, p. 420
24. B, p. 420
25. B, p. 421
26. E, p. 419

**True or false**

27. Catabolism, p. 416
28. T
29. T
30. Nonelectrolyte, p. 417
31. T
32. Hypervolemia, p. 419
33. Tubular function, p. 421
34. 2400 ml, p. 416
35. T
36. 1000 mEq to 1300 mEq, p. 420

**Fill in the blanks**

37. Dehydration, p. 421
38. Decreases, p. 421
39. Decrease, p. 421
40. Overhydration, p. 421
41. Intravenous fluids, p. 421
42. Heart, p. 421

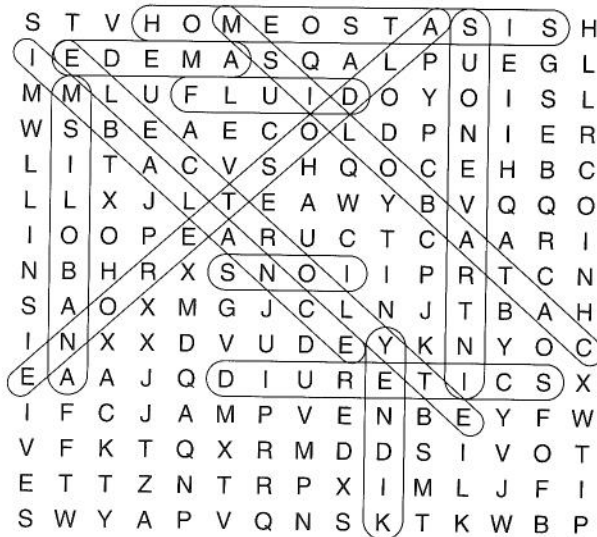
**Unscramble the words**

43. Edema
44. Fluid
45. Ion
46. Intravenous
47. Volume

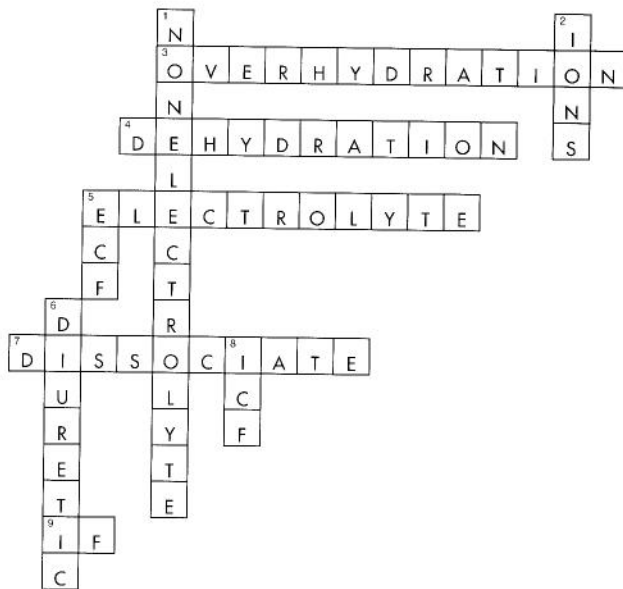
**Applying what you know**

48. Ms. Titus could not accurately measure water intake created by foods or catabolism, nor could she measure output created by lungs, skin, or the intestines.
49. A careful record of fluid intake and output should be maintained and the patient should be monitored for signs and symptoms of electrolyte and water imbalance.

50. WORD FIND



Crossword



Check your knowledge

Multiple choice

1. A, p. 414
2. D, p. 416
3. D, p. 415
4. C, p. 416
5. A, p. 421
6. B, p. 419
7. D, p. 420
8. A, p. 419
9. A, p. 415
10. D, p. 416

Completion

11. E, p. 415
12. B, p. 415
13. A, p. 417
14. J, p. 413
15. D, p. 421
16. C, p. 413
17. F, p. 419
18. G, p. 421
19. H, p. 421
20. I, p. 420
21. O, p. 419
22. L, p. 415
23. M, p. 417
24. N, p. 418
25. K, p. 417

CHAPTER 19  
ACID-BASE BALANCE

Choose the correct term

1. B, p. 428
2. A, p. 428
3. A, p. 428
4. B, p. 428
5. B, p. 428
6. B, p. 428
7. B, p. 428
8. A, p. 428
9. B, p. 428
10. B, p. 428

Multiple Choice

11. E, p. 429
12. E, p. 429
13. A, p. 429
14. E, p. 431
15. C, p. 431
16. D, p. 431
17. C, p. 432
18. B, p. 432
19. D, p. 432
20. E, p. 434
21. E, p. 434

True or false

22. Buffer (instead of heart), p. 429
23. Buffer pairs, p. 429
24. T
25. T
26. Alkalosis, p. 432
27. Kidneys, p. 432
28. T
29. Kidneys, p. 434
30. Lungs, p. 434

### Matching

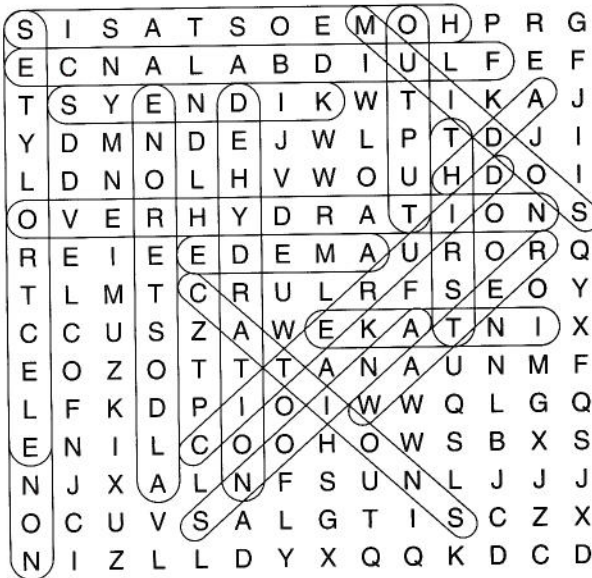
- 31. E, p. 435
- 32. G, p. 432
- 33. F, p. 435
- 34. A, p. 434
- 35. I, p. 435
- 36. B, p. 434
- 37. H, p. 434
- 38. C, p. 434
- 39. D, p. 434
- 40. J, p. 434

### Unscramble the words

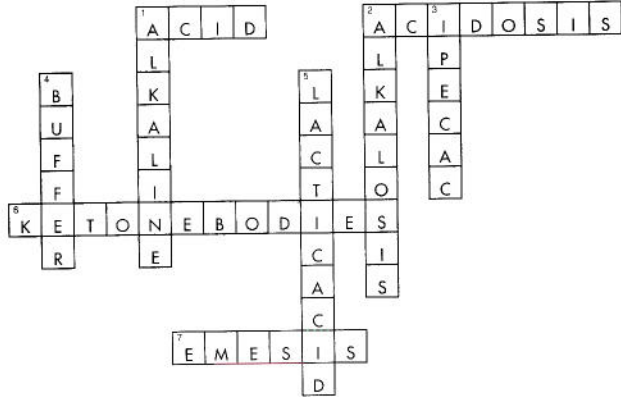
- 41. Fluids
- 42. Bicarbonate
- 43. Base
- 44. Fixed
- 45. Hydrogen
- 46. Buffer

### Applying what you know

- 47. Normal saline contains chloride ions, which replace bicarbonate ions and thus relieve the bicarbonate excess which occurs during severe vomiting.
  - 48. Most citrus fruits, although acid-tasting, are fully oxidized during metabolism and have little effect on acid-base balance. Cranberry juice is one of the few exceptions.
  - 49. Milk of magnesia. It is a base. Milk is slightly acidic (see chart, p. 428).
50. WORD FIND



### Crossword



### Check your knowledge

#### Multiple choice

- 1. A, p. 434
- 2. C, p. 428
- 3. A, p. 429
- 4. D, p. 431
- 5. A, p. 435
- 6. D, p. 429
- 7. D, p. 434
- 8. D, p. 434
- 9. D, p. 435
- 10. A, p. 436

#### Matching

- 11. G, p. 428
- 12. C, p. 428
- 13. I, p. 429
- 14. E, p. 431
- 15. F, p. 429
- 16. A, p. 432
- 17. B, p. 429
- 18. D, p. 432
- 19. J, p. 434
- 20. H, p. 434

## CHAPTER 20 THE REPRODUCTIVE SYSTEMS

### Matching

- #### Group A
- 1. D, p. 442
  - 2. C, p. 442
  - 3. E, p. 441
  - 4. B, p. 442
  - 5. A, p. 441

- #### Group B
- 6. C, p. 442
  - 7. A, p. 442

8. D, p. 441
9. B, p. 442
10. E, p. 442

### Multiple choice

11. B, p. 443
12. C, p. 443
13. A, p. 443
14. D, p. 447
15. E, p. 443
16. D, p. 446
17. C, p. 446
18. C, p. 443
19. A, p. 446
20. B, p. 447

### Fill in the blanks

21. Testes, p. 442
22. Spermatozoa or sperm, p. 443
23. Ovum, p. 441
24. Testosterone, p. 443
25. Interstitial cells, p. 443
26. Masculinizing, p. 446
27. Anabolic, p. 446

### Choose the correct term

28. B, p. 447
29. H, p. 448
30. G, p. 448
31. A, p. 447
32. F, p. 448
33. C, p. 447
34. I, p. 447
35. E, p. 448
36. D, p. 448
37. J, p. 449

### Matching

38. D, p. 450
39. C, p. 450
40. B, p. 450
41. A, p. 450
42. E, p. 450

### Select the correct term

43. A, p. 455
44. B, p. 450
45. A, p. 455
46. B, p. 450
47. A, p. 455
48. A, p. 455
49. A, p. 455
50. B, p. 450

### Fill in the blanks

51. Gonads, p. 451
52. Oogenesis, p. 451
53. Meiosis, p. 451
54. One-half or 23, p. 452
55. Fertilization, p. 452
56. 46, p. 452
57. Estrogen, p. 452
58. Progesterone, p. 452
59. Secondary sexual characteristics, p. 452
60. Menstrual cycle, p. 452
61. Puberty, p. 452

### Select the correct term

62. A, p. 453
63. B, p. 453
64. C, p. 454
65. B, p. 453
66. A, p. 452; C, p. 454
67. B, p. 452
68. A, p. 452
69. A, p. 452
70. C, p. 454
71. B, p. 458

### Matching

#### Group A

72. D, p. 454
73. E, p. 454
74. B, p. 454
75. C, p. 454
76. A, p. 454

#### Group B

77. E, p. 455
78. A, p. 455
79. D, p. 455
80. B, p. 455
81. C, p. 455

### True or false

82. Menarche, p. 455
83. One, p. 456
84. 14, p. 456
85. Menstrual period, p. 456
86. T, p. 456
87. Anterior, p. 456

### Matching

88. B, p. 458
89. A, p. 456
90. B, p. 456
91. B, p. 456
92. A, p. 458

**Unscramble the words**

- 93. Vulva
- 94. Testes
- 95. Menses
- 96. Fimbriae
- 97. Prepuce
- 98. Vestibule

**Applying what you know**

- 99. Yes. The testes are not only essential organs of reproduction, but are also responsible for the "masculinizing" hormone. Without this hormone, Mr. Belinki will have no desire to reproduce.
- 100. Sterile—The sperm count may be too low to reproduce but the remaining testicle will produce enough masculinizing hormone to prevent impotency.
- 101. The uterine tubes are not attached to the ovaries and infections can exit at this area and enter the abdominal cavity.
- 102. Yes. Yes. Without the hormones from the ovaries to initiate the menstrual cycle, Mrs. Harlan will no longer have a menstrual cycle and can be considered to be in menopause (cessation of menstrual cycle).
- 103. No. Delceta still will have her ovaries which are the source of her hormones, she will not experience menopause due to this procedure.

104. WORD FIND

M	K	O	V	I	D	U	C	T	S	E	D	H	G
S	E	I	R	A	V	O	I	F	U	T	G	L	L
I	N	H	Z	H	M	P	M	K	O	H	I	C	W
D	D	V	A	S	D	E	F	E	R	E	N	S	H
I	O	A	C	C	I	P	J	V	E	H	Y	D	S
H	M	G	R	R	B	M	N	X	F	G	Y	I	O
C	E	I	O	O	E	Z	Y	T	I	C	S	T	E
R	T	N	S	T	P	S	D	D	N	O	V	A	D
O	R	A	O	U	W	E	B	A	I	J	S	M	Z
T	I	C	M	M	E	Y	N	E	M	D	L	R	V
P	U	A	E	U	D	G	M	I	E	H	I	E	H
Y	M	O	T	C	E	T	A	T	S	O	R	P	B
R	P	E	E	R	M	N	E	G	O	R	T	S	E
C	O	W	P	E	R	S	I	N	X	K	E	A	P

**Crossword**

1	A														
	M	2	C	L	I	T	O	R	I	S					
	E		I												
	N	3	A	R	E	O	L	A	4	P					
	O		C												
	R		U	5	S	E	M	E	N						
	R	6	G	A	M	E	T	E	S	7	V	U	L	V	A
	H		C												
	T		I	8	M	9	G	C							
10	E	S	T	O	S	T	E	R	O	N	E				
	A		I		N		N								
			O		S		A								
			N		E		D								
					S		S								

**Check your knowledge**

*Multiple choice*

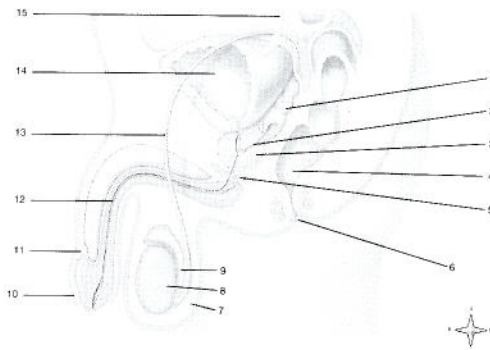
- 1. A, p. 442
- 2. D, p. 446
- 3. D, p. 448
- 4. C, p. 447
- 5. C, p. 448
- 6. A, p. 451
- 7. B, p. 452
- 8. C, p. 455
- 9. A, p. 443
- 10. D, p. 459

*Matching*

- 11. C, p. 441
- 12. A, p. 443
- 13. H, p. 446
- 14. G, p. 448
- 15. F, p. 442
- 16. E, p. 458
- 17. B, p. 444
- 18. D, p. 455
- 19. J, p. 454
- 20. I, p. 455

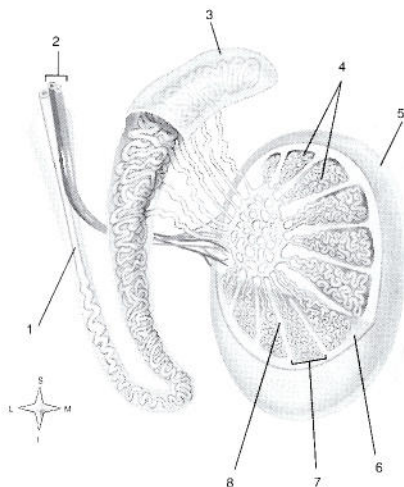
### Male reproductive organs

1. Seminal vesicle
2. Ejaculatory duct
3. Prostate gland
4. Rectum
5. Bulbourethral (Cowper's gland)
6. Anus
7. Scrotum
8. Testis
9. Epididymis
10. Foreskin
11. Penis
12. Urethra
13. Ductus deferens
14. Urinary bladder
15. Ureter



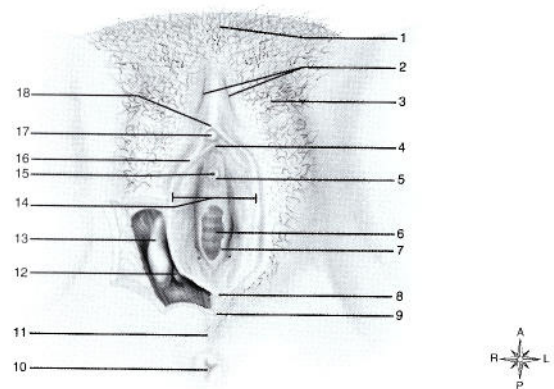
### Tubules of testis and epididymis

1. Ductus (vas) deferens
2. Nerves and blood vessels in the spermatic cord
3. Epididymis
4. Seminiferous tubules
5. Testis
6. Tunica albuginea
7. Lobule
8. Septum



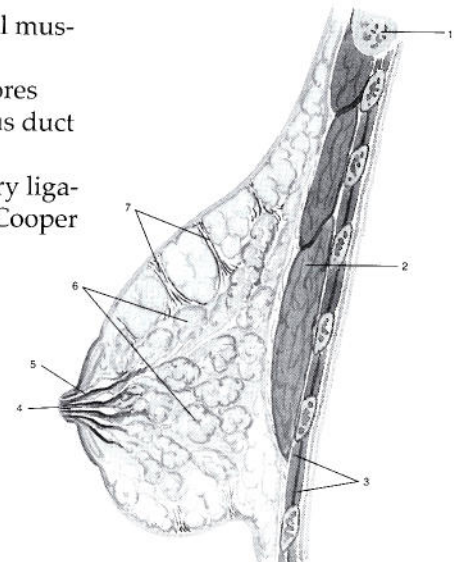
### Vulva

1. Mons pubis
2. Pudendal fissure
3. Labium majus
4. Frenulum (of clitoris)
5. Opening of lesser vestibular (Skene) gland
6. Orifice of vagina
7. Hymen
8. Frenulum (of labia)
9. Posterior commissure (of labia)
10. Anus
11. Perineum
12. Greater vestibular (Bartholin) gland
13. Vestibule (clitoral bulb)
14. Vestibule
15. External urinary meatus
16. Labium minus
17. Clitoris (glans)
18. Foreskin (prepuce)



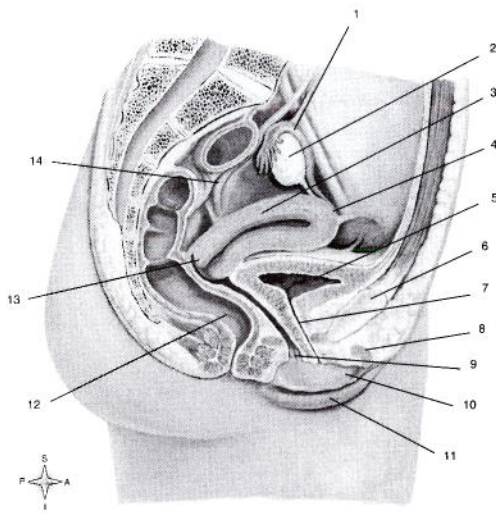
### Breast

1. Clavicle
2. Pectoralis major muscle
3. Intercostal muscles
4. Nipple pores
5. Lactiferous duct
6. Alveoli
7. Suspensory ligaments of Cooper



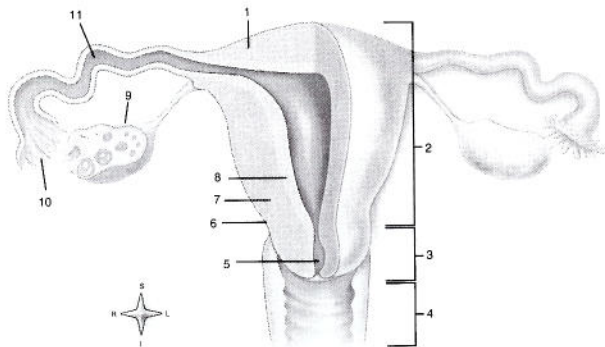
**Female pelvis**

1. Uterine tube (fallopian tube)
2. Ovary
3. Body of uterus
4. Fundus of uterus
5. Urinary bladder
6. Symphysis pubis
7. Urethra
8. Clitoris
9. Vagina
10. Labium minus
11. Labium majus
12. Rectum
13. Cervix
14. Ureter



**Uterus and adjacent structures**

1. Fundus
2. Body of uterus
3. Cervix
4. Vagina
5. Cervical canal
6. Perimetrium
7. Myometrium
8. Endometrium



9. Ovary
10. Fimbriae
11. Uterine (fallopian) tube

**CHAPTER 21  
GROWTH AND DEVELOPMENT**

**Fill in the blanks**

1. Conception, p. 467
2. Birth, p. 467
3. Embryology, p. 468
4. Oviduct, fallopian tube, or uterine tube, p. 468
5. Zygote, p. 468
6. Morula, p. 468
7. Blastocyst, p. 468
- 8.. Amniotic cavity, p. 468
9. Chorion, p. 468
10. Placenta, p. 468

**Matching**

11. G, p. 471
12. F, p. 472
13. C, p. 478
14. B, p. 472
15. A, p. 471
16. H, p. 474
17. E, p. 477
18. D, p. 473
19. I, p. 471
20. J, p. 478

**Multiple choice**

21. E, p. 476
22. E, p. 477
23. E, p. 478
24. A, p. 478
25. B, p. 478
26. C, p. 478
27. B, p. 478
28. D, p. 478
29. E, p. 478
30. D, p. 479
31. C, p. 478
32. C, p. 479
33. C, p. 479
34. C, p. 479
35. E, p. 479

**Matching**

36. F, p. 476
37. A, p. 478
38. C, p. 479
39. H, p. 478
40. D, p. 479



- 41. B, p. 477
- 42. E, p. 479
- 43. G, p. 477
- 44. I, p. 480

**Fill in the blanks**

- 45. Lipping, p. 481
- 46. Osteoarthritis, p. 481
- 47. Nephron, p. 482
- 48. Barrel chest, p. 482
- 49. Atherosclerosis, p. 482
- 50. Arteriosclerosis, p. 482
- 51. Hypertension, p. 481
- 52. Presbyopia, p. 481
- 53. Cataract, p. 481
- 54. Glaucoma, p. 481

**Unscramble the words**

- 55. Infancy
- 56. Postnatal
- 57. Organogenesis
- 58. Zygote
- 59. Childhood
- 60. Fertilization

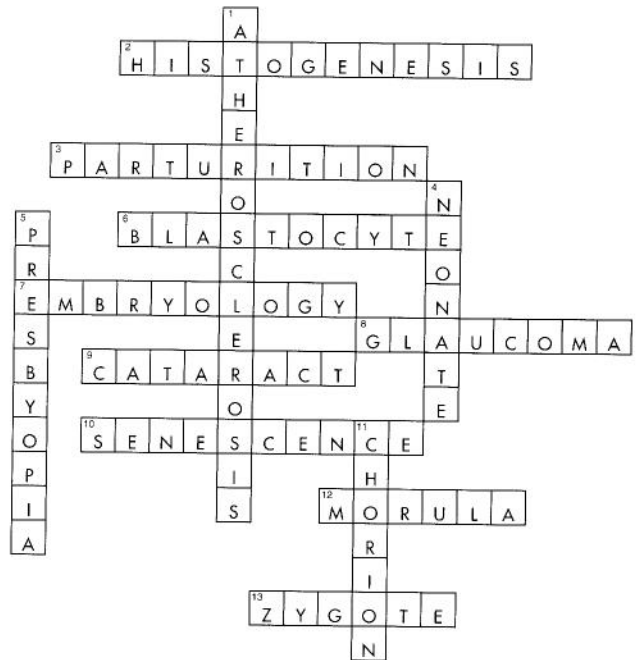
**Applying what you know**

- 61. Normal
- 62. Only about 40% of the taste buds present at age 30 remain at age 75.
- 63. A significant loss of hair cells in the organ of Corti causes a serious decline in ability to hear certain frequencies.

64. WORD FIND



**Crossword**



**Check your knowledge**

*Multiple choice*

- 1. C, p. 467
- 2. D, p. 468
- 3. D, p. 468
- 4. A, p. 468
- 5. D, p. 471
- 6. D, p. 472
- 7. C, p. 476
- 8. A, p. 472
- 9. C, p. 478
- 10. B, p. 480

*Matching*

- 11. E, p. 468
- 12. G, p. 468
- 13. C, p. 470
- 14. I, p. 480
- 15. H, p. 474
- 16. D, p. 477
- 17. J, p. 481
- 18. F, p. 481
- 19. A, p. 480
- 20. B, p. 477

### Fertilization and implantation

1. Ovary
2. Developing follicles
3. Corpus luteum
4. Fimbriae
5. Discharged ovum
6. Spermatozoa
7. First mitosis
8. Uterine (fallopian) tube
9. Divided zygote
10. Morula
11. Blastocyst
12. Implantation

