Chapter 11 - Study Guide

Student:

1. The major function/functions of the skeletal system includes the following:
   
   A. storing essential minerals  
   B. protecting vital organs  
   C. producing of blood  
   D. giving the body support and shape  
   E. All of the choices are correct.

2. The shaft of a long bone is called the ____________.
   
   A. diaphysis  
   B. endostium  
   C. epiphysis  
   D. periosteum  
   E. medullary cavity

3. __________ are tubular units that make up compact bone.
   
   A. Struts  
   B. Lamellae  
   C. Lacunae  
   D. Osteons  
   E. Trabeculae

4. The expanded region near the end of a long bone is called the ____________.
   
   A. diaphysis  
   B. endostium  
   C. epiphysis  
   D. periosteum  
   E. medullary cavity

5. __________ are thin plates or struts typically associated with spongy bone.
   
   A. Osteons  
   B. Lamellae  
   C. Lacunae  
   D. Canaliculi  
   E. Trabeculae
6. The _______ is a dense white covering on the outside of bone.
   A. endosteum
   B. epiphysis
   C. periosteum
   D. lamellae
   E. diaphysis

7. _________ are "houses" or structures that house both osteocytes and chondrocytes.
   A. Villi
   B. Osteon canals
   C. Canaliculi
   D. Lamellae
   E. Lacunae

8. The diaphysis of a long bone is made mostly of spongy bone containing _______.
   A. yellow bone marrow
   B. lamellae
   C. red bone marrow
   D. matrix
   E. endosteum

9. Fibrocartilage composes which of the following:
   A. the ends of long bones
   B. the external ear
   C. the intervertebral disks
   D. the skull
   E. the tarsals

10. Cartilage that is firm but somewhat flexible, contains abundant collagen, and is found at the ends of long bones is known as _______.
    A. hyaline cartilage
    B. fibrocartilage
    C. elastic cartilage
    D. ligamental cartilage
    E. none of the above

11. _________ connect bone to muscle and _________ connect bone to bone.
    A. Ligaments, tendons
    B. Tendons, ligaments
    C. Bursae, menisci
    D. Bursae, tendons
    E. Menisci, ligaments
12. __________ cartilage makes up the pinna or outside of the ear.
   A. Hyaline
   B. Transitional
   C. Dense
   D. Fibro
   E. Elastic

13. Choose the CORRECT pairing.
   A. osteocytes; mature bone cells
   B. osteoblasts; bone forming cells
   C. osteoclasts; bone destroying cells
   D. All of the choices are correct.

14. The majority of bones in the human body are formed through:
   A. endochondral ossification
   B. intramembranous ossification
   C. intermedullary ossification
   D. endomembranal ossification
   E. none of the above

15. Choose the correct chronological order for bone repair.
   A. 1) bony callus, 2) cartilagenous callus, 3) hematoma, 4) remodeling
   B. 1) cartilagenous callus, 2) bony callus, 3) remodeling, 4) hematoma
   C. 1) hematoma, 2) cartilagenous callus, 3) bony callus, 4) remodeling
   D. 1) remodeling, 2) cartilagenous callus, 3) hematoma, 4) bony callus
   E. none of the above

16. The function(s) of an osteoclast is (are) _______.
   A. breakdown of bone
   B. deposition of calcium in the blood
   C. secretion of the organic matrix of bone
   D. both A and B
   E. none of the above

17. Jen's grandmother suffered from a loss in bone mass and bone weakness. Unfortunately she broke her hip as the result of these symptoms. She was suffering from _________.
   A. Tay sach's disease
   B. Osteoporosis
   C. Osteopenia
   D. Paget's disease
   E. Rickets
18. In order to reduce the chances of developing osteoporosis, one must:

A. have adequate calcium in the diet  
B. exercise  
C. take a small amount of vitamin D in the diet  
D. all of the above

19. Which of these statements accurately contrasts the scapula and the sternum?

A. The scapula is part of the pectoral girdle, while the sternum is part of the pelvic girdle.  
B. The scapula is part of the appendicular skeleton, while the sternum is a part of the axial skeleton.  
C. Muscles attach to the coracoid process of the sternum, while the scapula has attachment points for the diaphragm.  
D. The scapula is part of the rib cage, while the sternum is part of the appendicular skeleton.

20. The axial skeleton does not include the:

A. bones of the face  
B. clavicle  
C. rib cage  
D. coccyx  
E. scapula

21. The human skeleton is comprised of ____ bones.

A. 80  
B. 126  
C. 144  
D. 206  
E. 308

22. The function of the sinuses is to:

A. resonate sound  
B. produce mucous  
C. produce antibodies  
D. lighten the weight of the skull  
E. both A and D

23. In the 1800s many ladies had their _________ removed to have a small waist line.

A. xiphoid process  
B. floating ribs  
C. true ribs  
D. false ribs  
E. illium
24. The CSI agent determined that the victim was strangled because she had a:
   A. fractured hyoid bone
   B. broken thoracic vertebrae
   C. displaced patella
   D. broken zygomatic process
   E. cracked mastoid bone

25. __________ joints are freely movable joints.
   A. Synarthroses
   B. Synovial
   C. Monoaxial
   D. Biaxial
   E. Amphiarthroses
Chapter 11 - Study Guide Key

1. The major function/functions of the skeletal system includes the following:

   A. storing essential minerals  
   B. protecting vital organs  
   C. producing of blood  
   D. giving the body support and shape  
   **E. All of the choices are correct.**

   The major function/functions of the skeletal system includes the following: storing essential minerals; protecting vital organs; producing blood; and giving the body support and shape.

2. The shaft of a long bone is called the ____________.

   **A. diaphysis**  
   B. endostium  
   C. epiphysis  
   D. periosteum  
   E. medullary cavity

   The shaft of a long bone is called the diaphysis.
3. ________ are tubular units that make up compact bone.

A. Struts  
B. Lamellae  
C. Lacunae  
D. Osteons  
E. Trabeculae

Osteons are tubular units that make up compact bone.

4. The expanded region near the end of a long bone is called the _________.

A. diaphysis  
B. endostium  
C. epiphysis  
D. periosteum  
E. medullary cavity

The expanded region near the end of a long bone is called the epiphysis.

5. ________ are thin plates or struts typically associated with spongy bone.

A. Osteons  
B. Lamellae  
C. Lacunae  
D. Canaliculi  
E. Trabeculae

Trabeculae are thin plates or struts typically associated with spongy bone.
6. The _______ is a dense white covering on the outside of bone.
   A. endosteum  
   B. epiphysis
   C. periosteum  
   D. lamellae  
   E. diaphysis

   The periosteum is a dense white covering on the outside of bone.

7. _________ are "houses" or structures that house both osteocytes and chondrocytes.
   A. Villi
   B. Osteon canals
   C. Canaliculi
   D. Lamellae
   E. Lacunae

   Lacunae are "houses" or structures that house both osteocytes and chondrocytes.

8. The diaphysis of a long bone is made mostly of spongy bone containing ____________.
   A. yellow bone marrow
   B. lamellae  
   C. red bone marrow
   D. matrix
   E. endosteum

   The diaphysis of a long bone is made mostly of spongy bone containing red bone marrow.
9. Fibrocartilage composes which of the following:

A. the ends of long bones  
B. the external ear  
C. the intervertebral disks  
D. the skull  
E. the tarsals

Fibrocartilage composes the intervertebral disks.

10. Cartilage that is firm but somewhat flexible, contains abundant collagen, and is found at the ends of long bones is known as ________________.

A. hyaline cartilage  
B. fibrocartilage  
C. elastic cartilage  
D. ligamental cartilage  
E. none of the above

Cartilage that is firm but somewhat flexible, contains abundant collagen, and is found at the ends of long bones is known as hyaline cartilage.
11. ___________ connect bone to muscle and ___________ connect bone to bone.

A. Ligaments, tendons  
**B.** Tendons, ligaments  
C. Bursae, menisci  
D. Bursae, tendons  
E. Menisci, ligaments

Tendons connect bone to muscle and ligaments connect bone to bone.

Chapter reference: 11  
Figure/section reference: 11.1  
Level of difficulty: Remember/Understand  
Mader - Chapter 11 #13  
Question type: Missing word sentence  
Topic Area: Skeletal System

12. ___________ cartilage makes up the pinna or outside of the ear.

A. Hyaline  
B. Transitional  
C. Dense  
D. Fibro  
**E.** Elastic

Elastic cartilage makes up the pinna or outside of the ear.

Chapter reference: 11  
Figure/section reference: 11.1  
Level of difficulty: Remember/Understand  
Mader - Chapter 11 #14  
Question type: Missing word sentence  
Topic Area: Skeletal System

13. Choose the CORRECT pairing.

A. osteocytes; mature bone cells  
B. osteoblasts; bone forming cells  
C. osteoclasts; bone destroying cells  
D. All of the choices are correct.

Osteocytes are mature bone cells, osteoblasts are cells that form bone, and osteoclasts are bone destroying cells.

Chapter reference: 11  
Figure/section reference: 11.2  
Level of difficulty: Apply/Analyze  
Mader - Chapter 11 #15  
Question type: Missing word sentence  
Topic Area: Skeletal System
14. The majority of bones in the human body are formed through:

A. endochondral ossification
B. intramembranous ossification
C. intermedullary ossification
D. endomembranal ossification
E. none of the above

The majority of bones in the human body are formed through endochondrial ossification.

15. Choose the correct chronological order for bone repair.

A. 1) bony callus, 2) cartilagenous callus, 3) hematoma, 4) remodeling
B. 1) cartilagenous callus, 2) bony callus, 3) remodeling, 4) hematoma
C. 1) hematoma, 2) cartilagenous callus, 3) bony callus, 4) remodeling
D. 1) remodeling, 2) cartilagenous callus, 3) hematoma, 4) bony callus
E. none of the above

The order of bone repair includes: 1) hematoma, 2) cartilagenous callus, 3) bony callus, 4) remodeling.

16. The function(s) of an osteoclast is (are) _______.

A. breakdown of bone
B. deposition of calcium in the blood
C. secretion of the organic matrix of bone
D. both A and B
E. none of the above

Osteoclasts function to break down bone and deposit calcium into the blood.
17. Jen's grandmother suffered from a loss in bone mass and bone weakness. Unfortunately she broke her hip as the result of these symptoms. She was suffering from _________.

A. Tay sach's disease  
B. Osteoporosis  
C. Osteopenia  
D. Paget's disease  
E. Rickets

Jen's grandmother suffered from a loss in bone mass and bone weakness. Unfortunately she broke her hip as the result of these symptoms. She was suffering from osteoporosis.

Chapter reference: 11  
Figure/section reference: 11.2  
Level of difficulty: Apply/Analyze  
Mader - Chapter 11 #26  
Question type: Missing word sentence  
Topic Area: Skeletal System

18. In order to reduce the chances of developing osteoporosis, one must:

A. have adequate calcium in the diet  
B. exercise  
C. take a small amount of vitamin D in the diet  
D. all of the above

In order to reduce the chances of developing osteoporosis, one must: have adequate calcium in the diet, exercise, and take a small amount of vitamin D in the diet.

Chapter reference: 11  
Figure/section reference: Health focus  
Level of difficulty: Apply/Analyze  
Mader - Chapter 11 #27  
Question type: Multiple choice  
Topic Area: Skeletal System
19. Which of these statements accurately contrasts the scapula and the sternum?

A. The scapula is part of the pectoral girdle, while the sternum is part of the pelvic girdle.
B. The scapula is part of the appendicular skeleton, while the sternum is a part of the axial skeleton.
C. Muscles attach to the coracoid process of the sternum, while the scapula has attachment points for the diaphragm.
D. The scapula is part of the rib cage, while the sternum is part of the appendicular skeleton.

The scapula is part of the appendicular skeleton, while the sternum is a part of the axial skeleton.

Chapter reference: 11
Figure/section reference: 11.3
Level of difficulty: Apply/Analyze
Mader - Chapter 11 #30
Question type: Multiple choice
Topic Area: Skeletal System

20. The axial skeleton does not include the:

A. bones of the face
B. clavicle
C. rib cage
D. coccyx
E. scapula

The axial skeleton does not include the coccyx.

Chapter reference: 11
Figure/section reference: 11.3
Level of difficulty: Remember/Understand
Mader - Chapter 11 #31
Question type: Multiple choice
Topic Area: Skeletal System

21. The human skeleton is comprised of _____ bones.

A. 80
B. 126
C. 144
D. 206
E. 308

The human skeleton is comprised of 206 bones.

Chapter reference: 11
Figure/section reference: 11.3
Level of difficulty: Remember/Understand
Mader - Chapter 11 #32
Question type: Multiple choice
Topic Area: Skeletal System
22. The function of the sinuses is to:

A. resonate sound  
B. produce mucous  
C. produce antibodies  
D. lighten the weight of the skull  
E. both A and D  

The function of the sinuses is to resonate sound and lighten the weight of the skull.

Chapter reference: 11  
Figure/section reference: 11.3  
Level of difficulty: Apply/Analyze  
Mader - Chapter 11 #34  
Question type: Multiple choice  
Topic Area: Skeletal System

23. In the 1800s many ladies had their _________ removed to have a small waist line.

A. xiphoid process  
B. floating ribs  
C. true ribs  
D. false ribs  
E. ilium  

In the 1800s many ladies had their floating ribs removed to have a small waist line.

Chapter reference: 11  
Figure/section reference: 11.3  
Level of difficulty: Evaluate/Create  
Mader - Chapter 11 #38  
Question type: Missing word sentence  
Topic Area: Skeletal System

24. The CSI agent determined that the victim was strangled because she had a:

A. fractured hyoid bone  
B. broken thoracic vertebrae  
C. displaced patella  
D. broken zygomatic process  
E. cracked mastoid bone  

The CSI agent determined that the victim was strangled because she had a fractured hyoid bone.

Chapter reference: 11  
Figure/section reference: 11.3  
Level of difficulty: Analyze  
Mader - Chapter 11 #39  
Question type: Analyze  
Topic Area: Skeletal System
25. __________ joints are freely movable joints.

A. Synarthroses  
B. Synovial  
C. Monoaxial  
D. Biaxial  
E. Amphiarthroses

Synovial joints are freely movable joints.
# Chapter 11 - Study Guide Summary

<table>
<thead>
<tr>
<th>Category</th>
<th># of Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter reference: 11</td>
<td>25</td>
</tr>
<tr>
<td>Figure/section reference: 11.1</td>
<td>12</td>
</tr>
<tr>
<td>Figure/section reference: 11.2</td>
<td>5</td>
</tr>
<tr>
<td>Figure/section reference: 11.3</td>
<td>6</td>
</tr>
<tr>
<td>Figure/section reference: 11.5</td>
<td>1</td>
</tr>
<tr>
<td>Figure/section reference: Health focus</td>
<td>1</td>
</tr>
<tr>
<td>Level of difficulty: Apply/Analyze</td>
<td>6</td>
</tr>
<tr>
<td>Level of difficulty: Evaluate/Create</td>
<td>1</td>
</tr>
<tr>
<td>Level of difficulty: Remember/Understand</td>
<td>18</td>
</tr>
<tr>
<td>Mader - Chapter 11</td>
<td>25</td>
</tr>
<tr>
<td>Question type: Missing word sentence</td>
<td>17</td>
</tr>
<tr>
<td>Question type: Multiple choice</td>
<td>7</td>
</tr>
<tr>
<td>Question type: Multiple choice</td>
<td>1</td>
</tr>
<tr>
<td>Topic Area: Skeletal System</td>
<td>25</td>
</tr>
</tbody>
</table>