

Chapter 2. Structure and Function of Joints

Multiple Choice

1. Which of the following bones make up the axial skeleton?
- A. Vertebral column, pelvis, thorax, and sternum
 - B. Bones in the upper and lower extremities, thorax, and sternum
 - C. Skull, vertebral column, thorax, sternum, sacrum, and coccyx
 - D. Pelvic bones, scapulae, bones in the upper and lower extremities

ANS: C

REF: 32

OBJ: 2.2

KEY: axial and appendicular skeleton

2. Which of the following lists of functions BEST describes the skeletal system functions?
- A. Stores collagen, produces blood cells, protects internal organs
 - B. Provides a rigid framework and muscle attachments, protects internal organs, stores calcium, produces blood cells
 - C. Stores blood cells, provides a rigid structure to the body, produces potassium
 - D. Provides protection for internal organs, forms rigid levers that provide muscle attachments, produces blood cells

ANS: B

REF: 33

OBJ: 2.1

KEY: function of skeletal system

3. Which of the following tissue components BEST elongates when stretched and returns to its original shape after being stretched?
- A. Type I collagen
 - B. Ground substance
 - C. Type II collagen
 - D. Elastin

ANS: D

REF: 33–34

OBJ: 2.3

KEY: cellular components of joint structures

4. Which of the following tissue components are thick and stiff, providing little elongation?

- A. Type I collagen
- B. Ground substance
- C. Type II collagen
- D. Elastin

ANS: A

REF: 33–34

OBJ: 2.3

KEY: cellular components of joint structures

5. Which of the following functions DOES NOT apply to the function of synovial fluid?

- A. Assists with shock absorption
- B. Nourishes the cartilage
- C. Stores calcium
- D. Reduces friction

ANS: C

REF: 35

OBJ: 2.3

KEY: synovial fluid

6. Which statement is MOST CORRECT related to ligaments?

- A. Attach muscle to bone, decrease in thickness and strength in response to tensile forces
- B. Attach bone to bone, increase in thickness and strength in response to tensile forces
- C. Attach muscle to bone, increase in thickness and strength in response to tensile forces
- D. Attach bone to bone, decrease in thickness and strength in response to tensile forces

ANS: B

REF: 35–36

OBJ: 2.4

KEY: ligaments, joint structures

7. Which statement is MOST CORRECT related to tendons?

- A. Attach muscle to bone, transmit forces for movement or to stabilize bone
- B. Reduce friction between joint surfaces

- C. Attach muscle to bone, assist with absorption of joint surface stresses
- D. Flat sac of synovial membrane

ANS: A

REF: 35–36

OBJ: 2.4

KEY: tendons, joint structures

8. Which of the following characteristics is LEAST LIKELY associated with bone compared with cartilage?

- A. Mostly collagen
- B. Significant capability for repairs
- C. High deformation capabilities
- D. Composed of chondroitin sulfate

ANS: C

REF: 38

OBJ: 2.4

KEY: bone, cartilage

9. Which joint is the BEST example of a suture joint?

- A. Joints in the skull
- B. Tooth in maxilla bone
- C. Intervertebral disc
- D. Costal cartilage between ribs and sternum

ANS: A

REF: 38–41

OBJ: 2.5

KEY: joint classification

10. Which joint is the BEST example of a gomphosis joint?

- A. Joints in the skull
- B. Tooth in maxilla bone
- C. Intervertebral disc
- D. Costal cartilage between ribs and sternum

ANS: B

REF: 38–41

OBJ: 2.5

KEY: joint classification

11. Which joint is the BEST example of a symphysis joint?

- A. Joints in the skull
- B. Tooth in maxilla bone
- C. Intervertebral disc
- D. Costal cartilage between ribs and sternum

ANS: C

REF: 38–41

OBJ: 2.5

KEY: joint classification

12. Which joint is the BEST example of a ball-and-socket joint?

- A. Shoulder joint
- B. Elbow joint
- C. Atlantoaxial joint
- D. Wrist carpal joint

ANS: A

REF: 38–41

OBJ: 2.5

KEY: joint classification

13. Which joint is the BEST example of a hinge joint?

- A. Shoulder joint
- B. Elbow joint
- C. Atlantoaxial joint
- D. Wrist carpal joint

ANS: B

REF: 38–41

OBJ: 2.5

KEY: joint classification

14. Which joint is the BEST example of a pivot joint?

- A. Shoulder joint
- B. Elbow joint

- C. Atlantoaxial joint
- D. Wrist carpal joint

ANS: C

REF: 38–41

OBJ: 2.5

KEY: joint classification

15. Which joint is the BEST example of a uniaxial joint?

- A. Shoulder joint
- B. Elbow joint
- C. Atlantoaxial joint
- D. Wrist carpal joint

ANS: B

REF: 41–42

OBJ: 2.5

KEY: joint classification

16. Which joint is the BEST example of a triaxial joint?

- A. Shoulder joint
- B. Elbow joint
- C. Atlantoaxial joint
- D. Wrist carpal joint

ANS: A

REF: 41–42

OBJ: 2.5

KEY: joint classification

17. What type of end-feel is depicted by motion limited by bone in contact with bone?

- A. Empty end-feel
- B. Firm or capsular end-feel
- C. Hard or bony end-feel
- D. Soft end-feel

ANS: C

REF: 43–44

OBJ: 2.6

KEY: end-feel

18. What type of end-feel is depicted by motion limited by muscle bulk approximating another muscle?

- A. Empty end-feel
- B. Firm or capsular end-feel
- C. Hard or bony end-feel
- D. Soft end-feel

ANS: D

REF: 43–44

OBJ: 2.6

KEY: end-feel

19. What type of end-feel is depicted by motion limited by pain?

- A. Empty end-feel
- B. Firm or capsular end-feel
- C. Hard or bony end-feel
- D. Soft end-feel

ANS: A

REF: 43–44

OBJ: 2.6

KEY: end-feel

20. A patient experiences pain at 90° of elbow flexion. Which end-feel BEST depicts the patient's condition?

- A. Empty end-feel
- B. Firm or capsular end-feel
- C. Hard or bony end-feel
- D. Soft end-feel

ANS: A

REF: 43–44

OBJ: 2.6

KEY: end-feel

21. Which of the following characteristics are associated with a close-packed position?

- A. Surfaces are incongruent

- B. Position often occurs at extreme ends of range
- C. Joint ligaments and capsule are slack
- D. Increased joint play between surfaces

ANS: B

REF: 44

OBJ: 2.8

KEY: loose-packed and close-packed positions

22. Which of the following characteristics are associated with the arthrokinematic motion of rolling?

- A. Motion is linear
- B. Sliding motion
- C. One surface spins around another
- D. Points of contact of each surface keep changing

ANS: D

REF: 44–46

OBJ: 2.7

KEY: arthrokinematic motion

23. Which characteristics are associated with the arthrokinematic motion of spinning?

- A. Motion is linear
- B. Sliding motion
- C. One surface spins around another
- D. Points of contact of each surface keep changing

ANS: C

REF: 44–46

OBJ: 2.7

KEY: arthrokinematic motion

24. In general, if applying the concave-convex pattern of movement, if the humeral shaft moves superiorly during shoulder abduction, in which direction will the convex humeral head glide?

- A. Inferiorly
- B. Anteriorly
- C. Superiorly
- D. Posteriorly

ANS: A

REF: 46

OBJ: 2.7

KEY: arthrokinematic motion

25. Which of the following consequences is NOT a result of prolonged joint immobilization?

- A. Weakening of joint ligaments
- B. Increased resistance to movement
- C. Thickening of joint cartilage
- D. Weakening of muscles

ANS: A

REF: 46

OBJ: 2.9

KEY: arthrokinematic motion