1. Which type of joint is characterized by bones united by fibrous tissue?
   a) Fibrous joints
   b) Cartilaginous joints
   c) Synovial joints
   d) Ligamentous joints

2. Which of the following is an example of a fibrous joint?
   a) Intervertebral disc joint
   b) Symphysis pubis
   c) Sutures (Skull sutures)
   d) Chostochondral joint

3. In which type of joint are bones connected by cartilage?
   a) Fibrous joints
   b) Synovial joints
   c) Ligamentous joints
   d) Cartilaginous joints

4. What type of cartilaginous joint is found between the root of the teeth and the socket of the jaw?
   a) Synchondrosis
   b) Symphysis
   c) Sutures
   d) Gomphosis

5. Which type of cartilaginous joint is found in the midline of the body?

a) Synchondrosis
b) Symphysis
c) Gomphosis
d) Sutures

6. Synovial joints are characterized by:
a) Bones united by fibrous tissue
b) Bones connected by cartilage
c) Articulating bones separated by a joint cavity
d) Lack of ligaments

7. What covers the ends of bones in synovial joints?
a) Fibrous tissue
b) Cartilage
c) Ligaments
d) Tendons

8. The joint capsule in synovial joints is lined by:
a) Fibrous tissue
b) Cartilage
c) Synovial membrane
d) Ligaments

9. Synovial joints have a joint cavity filled with:
a) Blood
b) Synovial fluid
c) Lymph
d) Cartilage

10. What reinforces synovial joints?

a) Fibrous tissue
b) Cartilage
c) Ligaments
d) Tendons

11. Which of the following is NOT a type of fibrous joint?
a) Sutures
b) Syndesmoses
c) Gomphosis
d) Symphysis

12. What type of cartilaginous joint is found at the epiphyseal plate of growing bones?
a) Symphysis
b) Synchondrosis
c) Sutures
d) Gomphosis

13. Symphysis pubis is an example of which type of joint?
a) Fibrous joint
b) Cartilaginous joint
c) Synovial joint
d) Ligamentous joint

14. Which type of joint allows the greatest range of motion?
a) Fibrous joint
b) Cartilaginous joint
c) Synovial joint
d) Ligamentous joint

15. Where is the synovial membrane located in synovial joints?
    a) Outer layer of the joint capsule
    b) Inner layer of the joint capsule
    c) Surrounding the bones
    d) Covering the articular cartilage

16. Which type of joint is found between the distal end of the tibia and fibula?
    a) Gomphosis
    b) Sutures
    c) Syndesmosis
    d) Synchondrosis

17. Which type of joint is found between adjacent vertebrae in the spine?
    a) Gomphosis
    b) Syndesmosis
    c) Symphysis
    d) intervertebral joints

18. What is the main function of the synovial fluid in synovial joints?
    a) To provide structural support
    b) To reduce friction between bones
    c) To strengthen ligaments
    d) To increase bone density

19. Which of the following is an example of a synovial joint?
    a) Elbow joint

b) Skull sutures
c) Symphysis pubis
d) Gomphosis

20. What type of joint allows for little to no movement?
a) Fibrous joint
b) Cartilaginous joint
c) Synovial joint
d) Ligamentous joint

21. Which type of muscle is primarily responsible for initiating a particular movement?
a) Antagonist
b) Synergist
c) Prime mover (agonist)
d) Fixator (stabilizer)

22. What is the role of antagonist muscles in muscle action?
a) Assist the prime mover
b) Initiate movement
c) Oppose the action of prime movers
d) Stabilize the origin of the muscle

23. Which type of muscle assists the prime mover in its role?
a) Antagonist
b) Synergist
c) Prime mover (agonist)
d) Fixator (stabilizer)

24. What is the function of fixator muscles in muscle action?
   a) Oppose the action of prime movers
   b) Assist the prime mover
   c) Stabilize the origin of the muscle
   d) Initiate movement

25. Which type of muscle helps keep bones immobile when needed during muscle action?
   a) Antagonist
   b) Synergist
   c) Prime mover (agonist)
   d) Fixator (stabilizer)

26.What is the origin of a muscle?
a) The point of attachment that moves during contraction
b) The point of attachment that remains fixed during contraction
c) The point where the muscle attaches to a bone
d) The point where two muscles intersect

27.What is the insertion of a muscle?
a) The point of attachment that moves during contraction
b) The point of attachment that remains fixed during contraction
c) The point where the muscle attaches to a bone
d) The point where two muscles intersect

28.During muscle contraction, which attachment moves towards the other?
a) Origin moves towards insertion

b) Insertion moves towards origin
c) Both origin and insertion move apart
d) Both origin and insertion remain stationary

29.What happens to a muscle's fibers when it contracts?
a) They lengthen
b) They stay the same
c) They shorten
d) They detach from the bone

30.What is the primary function of knowing the origin and insertion of muscles?
a) To determine the muscle's color
b) To identify the muscle's shape
c) To understand the muscle's action and movement at joints
d) To classify the muscle as voluntary or involuntary
31. What is the function of the epiphysis in a long bone?
a) Blood cell production
b) Articulation
c) Bone growth
d) Protection

32. Which type of cartilage covers the articular surface of the epiphysis?
a) Elastic cartilage
b) Fibrocartilage
c) Hyaline cartilage
d) Fibrous cartilage

33. Which part of the long bone is externally covered by

periosteum?
a) Epiphysis
b) Diaphysis
c) Metaphysis
d) Epiphyseal plate

34. Where is the metaphysis located in relation to the long bone?
a) Between epiphysis and diaphysis
b) Within the epiphysis
c) At the end of the diaphysis
d) Surrounding the epiphyseal plate

35. What is the function of the epiphyseal plate in long bones?
a) Blood cell production
b) Protection
c) Bone growth
d) Articulation

36. Which cavity contains bone marrow in a long bone?
a) Epiphysis
b) Diaphysis
c) Metaphysis
d) Medullary cavity

37. What is the main function of the medullary cavity in a long bone?
a) Articulation
b) Blood cell production

c) Storage of minerals
d) Contains bone marrow

38. What type of tissue covers the external surface of a long bone, except at the articular surfaces?
a) Periosteum
b) Endosteum
c) Epiphysis
d) Articular cartilage

39. What is the function of the metaphysis in a long bone?
a) Articulation
b) Blood cell production
c) Bone growth
d) Protection

40. Which part of the long bone is primarily responsible for providing structural support and strength?
a) Epiphysis
b) Diaphysis
c) Metaphysis
d) Epiphyseal plate

41. Where does bone growth primarily occur in a growing long bone?
a) Diaphysis
b) Epiphysis
c) Metaphysis
d) Epiphyseal plate

42. What is the function of the articular cartilage in the epiphysis?
a) Blood cell production
b) Protection
c) Bone growth
d) Smooth movement at joints

43. Which type of synovial joint permits flexion and extension only?
a) Hinge joint
b) Pivot joint
c) Plane joint
d) Condyloid joint

44. Which joint allows rotational movement?
a) Hinge joint
b) Plane joint
c) Pivot joint
d) Saddle joint

45. What type of movement does a condyloid joint permit?
a) Flexion/extension and abduction/adduction
b) Flexion/extension only
c) Rotation
d) Gliding movement

46. Which joint has both concave and convex areas on each articular surface?
a) Hinge joint
b) Pivot joint

c) Saddle joint
d) Ball and socket joint

47. What type of movement does a saddle joint allow?
a) Flexion and extension
b) Abduction and adduction
c) Rotation
d) Circumduction

48. Which type of joint is found between the shallow depression of one bone and the rounded structure of another bone or bones?
a) Hinge joint
b) Pivot joint
c) Condyloid joint
d) Saddle joint

49. Which joint permits the most extensive range of motion?
a) Hinge joint
b) Pivot joint
c) Condyloid joint
d) Ball and socket joint

50. Which joint is found between the radius and ulna bones?
a) Hinge joint
b) Pivot joint
c) Condyloid joint
d) Saddle joint

51. Which joint is commonly known as the shoulder joint?

a) Hinge joint
b) Pivot joint
c) Condyloid joint
d) Ball and socket joint

52. Which joint is found between the carpal bones?
a) Hinge joint
b) Pivot joint
c) Plane joint
d) Saddle joint

Answers:

1. a) Fibrous joints
2. c) Sutures (Skull sutures)
3. d) Cartilaginous joints
4. d) Gomphosis
5. a) Synchondrosis
6. c) Articulating bones separated by a joint cavity
7. b) Cartilage
8. c) Synovial membrane
9. b) Synovial fluid
10. c) Ligaments
11. d) Symphysis
12. b) Synchondrosis
13. b) Cartilaginous joint
14. c) Synovial joint
15. b) Inner layer of the joint capsule

16. c) Syndesmosis
17. d) Intervertebral joints
18. b) To reduce friction between bones
19. a) Elbow joint
20. a) Fibrous joint
21. c) Prime mover (agonist)
22. c) Oppose the action of prime movers
23. b) Synergist
24. c) Stabilize the origin of the muscle
25. d) Fixator (stabilizer)
26. b) The point of attachment that remains fixed during contraction
27. a) The point of attachment that moves during contraction
28. a) Origin moves towards insertion
29. c) They shorten
30. c) To understand the muscle's action and movement at joints
31. c) Bone growth
32. c) Hyaline cartilage
33. b) Diaphysis
34. a) Between epiphysis and diaphysis
35. c) Bone growth
36. d) Medullary cavity
37. c) Storage of minerals
38. a) Periosteum
39. c) Bone growth
40. b) Diaphysis
41. d) Epiphyseal plate
42. d) Smooth movement at joints
43. a) Hinge joint

44. c) Pivot joint
45. a) Flexion/extension and abduction/adduction
46. d) Saddle
47. b) Abduction and adduction
48. c) Condyloid joint
49. d) Ball and socket joint
50. b) Pivot joint
51. d) Ball and socket joint
52. c) Plane joint