CHAPTER – 8: Locomotion and Movement

1. **What is the primary function of the skeletalsystem?**

   a) Digestion

   b) Locomotion and support

   c) Circulation

   d) Respiration

2. **Which type of joint allows movement in alldirections?**

   a) Hinge joint

   b) Ball and socket joint

   c) Pivot joint

   d) Saddle joint

Which of the following is a type of muscletissue?

   a) Cardiac muscle

   b) Nervous tissue

   c) Connective tissue

   d) Epithelial tissue

4. **What is the structural and functional unitof a muscle fiber?**

   a) Sarcomere

   b) Actin

   c) Myosin

   d) Tendon

5. **Which protein is involved in musclecontraction?**

   a) Hemoglobin

   b) Actin

   c) Collagen

   d) Fibrinogen

6. **What is the primary component of bones?**

   a) Calcium

   b) Phosphorus

   c) Iron

   d) Potassium

7. **Which type of joint is found in the elbow?**
   - **a) Hinge joint**
   - **b) Ball and socket joint**
   - **c) Gliding joint**
   - **d) Pivot joint**
8. **Which of the following is an example ofvoluntary muscle?**
   - **a) Cardiac muscle**
   - **b) Smooth muscle**
   - **c) Skeletal muscle**
   - **d) Involuntary muscle**
9. **Which structure connects muscles tobones?**
   - **a) Ligament**
   - **b) Tendon**
   - **c) Cartilage**
   - **d) Joint capsule**
10. **What is the role of myosin in musclecontraction?**
    - **a) Release energy**
    - **b) Bind to actin filaments**
    - **c) Produce ATP**
    - **d) Stimulate nerve cells**
11. **Which type of muscle is responsible forheart contractions?**
    - **a) Skeletal muscle**
    - **b) Smooth muscle**
    - **c) Cardiac muscle**
    - **d) Involuntary muscle**
12. **What is the basic functional unit of a bone?**
    - **a) Osteocyte**
    - **b) Sarcomere**
    - **c) Osteon**
    - **d) Cartilage**
13. **Which mineral is essential for musclecontraction?**

a) Sodium

b) Calcium

c) Potassium

d) Magnesium

14. Which structure covers the ends of bones ata joint to reduce friction?

a) Tendon

b) Cartilage

c) Ligament

d) Periosteum

15. Which of the following is an example of apivot joint?

a) Hip joint

b) Elbow joint

c) Neck joint

d) Wrist joint

16. What type of muscle controls involuntarymovements in the digestive system?

a) Skeletal muscle

b) Smooth muscle

c) Cardiac muscle

d) Voluntary muscle

17. Which type of joint allows rotationalmovement?

a) Pivot joint

b) Ball and socket joint

c) Hinge joint

d) Saddle joint

18. What is the role of ATP in musclecontraction?

a) Provide energy

b) Bind to calcium

c) Release actin

d) Form the myosin filament

19. What is the term for the place where two ormore bones meet?

a) Ligament

b) Tendon

c) Joint

d) Sarcomere

20. Which type of joint is found in theshoulder?

a) Ball and socket joint

b) Hinge joint

c) Pivot joint

d) Saddle joint

21. Which muscle type is under voluntarycontrol?

a) Cardiac muscle

b) Smooth muscle

c) Skeletal muscle

d) Involuntary muscle

22. What is the role of ligaments in the skeletalsystem?

a) Connect muscles to bones

b) Connect bones to bones

c) Protect bones from injury

d) Store minerals

23. What is the primary role of tendons?

a) Connect bones to bones

b) Connect muscles to bones

c) Protect joints

d) Allow joint movement

24. Which of the following is a long bone in thehuman body?

a) Femur

b) Skull

c) Sternum

d) Vertebra

25. Which part of the skeletal muscle initiatescontraction?

a) Sarcolemma

b) Sarcomere

c) Myosin

d) Actin

26. What is the function of cartilage in joints?

a) Absorb shock

b) Produce synovial fluid

c) Connect muscles to bones

d) Stimulate muscle contraction

27. Which of the following is an example of ahinge joint?

a) Knee joint

b) Shoulder joint

c) Hip joint

d) Wrist joint

28. Which type of muscle is found in the wallsof blood vessels?

a) Skeletal muscle
b) Smooth muscle

c) Cardiac muscle

d) Voluntary muscle

29. What is the primary function of bones?

a) Provide support and protection

b) Store calcium and phosphorus

c) Produce blood cells

d) All of the above

30. Which protein forms the thin filaments inmuscle fibers?

a) Myosin

b) Actin

c) Troponin

d) Tropomyosin

31. Which structure in the muscle fiber storescalcium for muscle contraction?

a) Mitochondria

b) Sarcolemma

c) Sarcoplasmic reticulum

d) Myofibril

32. Which of the following is responsible for the sliding filament mechanism in musclecontraction?

a) Actin and myosin

b) ATP and calcium

c) Sarcomeres and sarcolemma

d) Troponin and tropomyosin

33. What is the role of synovial fluid in joints?

a) Lubricate joints

b) Provide energy for movement

c) Produce blood cells

d) Absorb nutrients

34. Which joint allows movement in onedirection, such as bending and straightening?

a) Hinge joint

b) Ball and socket joint

c) Saddle joint

d) Pivot joint

35. Which type of muscle contraction occurs without changing the length of the muscle?

a) Isometric contraction

b) Isotonic contraction

c) Concentric contraction

d) Eccentric contraction

36. What is the term for the condition wherebones become weak and brittle?

a) Osteoporosis

b) Arthritis

c) Rickets

d) Osteomyelitis

37. What is the role of the axial skeleton?

a) Support and protect internal organs

b) Allow movement of the limbs

c) Store minerals

d) Produce blood cells

38. Which of the following muscles is found inthe upper arm?

a) Biceps

b) Triceps

c) Deltoid

d) All of the above

39. Which type of bone is primarily involved inprotection, such as the bones of the skull?

a) Long bones

b) Short bones

c) Flat bones

d) Irregular bones

40. What is the primary role of the vertebralcolumn?

a) Protect the spinal cord

b) Allow movement of the limbs

c) Store calcium

d) Produce blood cells

41. Which of the following is an example of animmovable joint?

a) Skull sutures

b) Shoulder joint

c) Elbow joint

d) Knee joint

42. Which type of muscle contraction occurswhen the muscle lengthens during contraction?

a) Isotonic contraction

b) Isometric contraction

c) Concentric contraction

d) Eccentric contraction

43. What is the name of the fluid-filled sac thatreduces friction between tissues in a

joint?

a) Synovial capsule

b) Tendon

c) Bursa

d) Ligament

44. Which muscle is primarily responsible forflexing the forearm?

a) Triceps

b) Biceps

c) Deltoid

d) Pectoralis major

45. What is the role of calcium ions in musclecontraction?

a) Provide energy

b) Bind to actin

c) Remove tropomyosin inhibition

d) Produce ATP

46. Which condition is characterized byinflammation of the joints?

a) Arthritis

b) Osteoporosis

c) Scoliosis

d) Rickets

47. Which of the following is a bone of thelower limb?

a) Femur

b) Radius

c) Humerus

d) Scapula

48. What is the name of the connective tissuethat surrounds and protects muscles?

a) Tendon

b) Ligament

c) Fascia

d) Cartilage

49. What is the term for the movement of abody part away from the midline?

a) Abduction

b) Adduction

c) Flexion

d) Extension

50. Which type of joint allows movement in twoplanes, such as the thumb joint?

a) Hinge joint

b) Pivot joint

c) Saddle joint

d) Ball and socket joint

Answer key

1	2	3	4	5
B	B	A	A	B
6	7	8	9	10
A	A	C	B	B
11	12	13	14	15
C	C	B	B	C
16	17	18	19	20
B	A	A	C	A
21	22	23	24	25
C	B	B	A	B
26	27	28	29	30
A	A	B	D	B
31	32	33	34	35
C	A	A	A	A
36	37	38	39	40
A	A	D	C	A
41	42	43	44	45
A	D	C	B	C
46	47	48	49	50
A	A	C	A	C