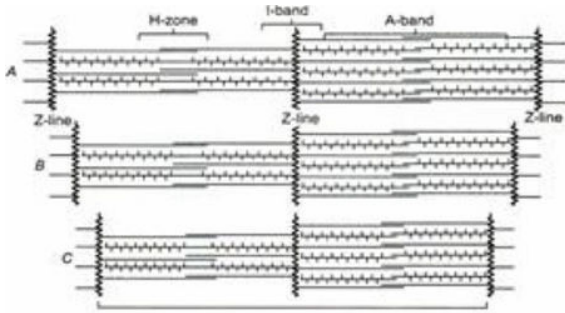


## Topic :- Locomotion & Movement

- Arrange the following steps of muscle contraction in the sequence of events occurring first
  - Receptor sites on sarcolemma
  - Nerve impulse
  - Release of  $\text{Ca}^{2+}$
  - Acetylcholine release
  - Shortening of sarcomere
  - Synaptic cleft
  - Spread of impulse over sarcolemma on T-tubuleThe correct option is
  - $\text{II} \rightarrow \text{IV} \rightarrow \text{VI} \rightarrow \text{I} \rightarrow \text{VII} \rightarrow \text{III} \rightarrow \text{V}$
  - $\text{II} \rightarrow \text{IV} \rightarrow \text{I} \rightarrow \text{VI} \rightarrow \text{VII} \rightarrow \text{III} \rightarrow \text{V}$
  - $\text{II} \rightarrow \text{IV} \rightarrow \text{I} \rightarrow \text{VI} \rightarrow \text{VII} \rightarrow \text{V} \rightarrow \text{III}$
  - $\text{IV} \rightarrow \text{II} \rightarrow \text{I} \rightarrow \text{VI} \rightarrow \text{VII} \rightarrow \text{V} \rightarrow \text{III}$
- The region at the ends of the A-band of two adjoining sarcomeres is called
  - H-zone
  - Z-band
  - I-band
  - M-zone
- Intervertebral disc consists of a shock absorber connective tissue known as
  - Hyaline cartilage
  - Elastic cartilage
  - Fibro cartilage
  - Reticulo cartilage
- Transverse ligament is found in
  - Axis
  - Atlas
  - Sacrum
  - Thoracic vertebra
- The region between two successive Z-lines in a myofibril is
  - Sarcomere
  - Sarcosome
  - Fascia
  - Anisotropic band
- Choose the correct statements
  - Axial skeleton comprises 80 bones
  - Skull, vertebral column, sternum and ribs constitutes axial skeleton
  - Skull have total 22 bones
  - All of the above
- The 'wish bone' or 'merry thought bone' of bird is
  - Sternum
  - Scapula
  - Coracoid
  - Clavicle
- Macrophages and leucocytes in blood exhibits

- a) Amoeboid movement                      b) Ciliary movement                      c) Muscular movement                      d) Flagellar movement
9. A cricket player is fast chasing a ball in the field. Which one of the following groups of bones are directly contributing in this movement?  
 a) Femur, malleus, tibia, metatarsals                      b) Pelvis, ulna, patella, tarsals  
 c) Sternum, femur, tibia, fibula                      d) Tarsals, femur, metatarsals, tibia
10. Pelvic girdle of rabbit consists of  
 a) Ilium, ischium and pubis                      b) Ilium, ischium and coracoids  
 c) Coracoid, scapula and clavicle                      d) Ilium, coracoid and scapula
11. Ilium, ischium, pubis are the  
 a) Cervical vertebrae                      b) Pectoral bones                      c) Coaxal bones                      d) Thoracic bones
12. Low level of  $Ca^{2+}$  ions in muscles result in  
 a) Rapid spasms                      b) Wild contractions                      c) Both (a) or (b)                      d) None of the above
13. In a vertebrate, which germ layer forms the skeleton muscles?  
 a) Ectoderm                      b) Endoderm                      c) Mesoderm                      d) Both (a) and (c)
14. Muscle is attached to bone by  
 a) Tendon                      b) Ligament                      c) Insertion                      d) Cartilage
15. Which of the following pairs is correctly matched?  
 a) Cartilaginous joint- skull bones  
 b) Hinge joint- Between vertebrae  
 c) Fibrous joint- Between phalanges  
 d) Gliding joint- Between zygapophyses of the successive vertebrae
16. Choose the correct properties of muscle fibres  
 I. Muscle fibre is lined by the plasma membrane called sarcolemma  
 II. Cytoplasm of the muscle fibre is called protoplasm  
 III. Sarcolemma of the muscle fibre encloses the sarcoplasm  
 IV. Muscle fibre is syncytium  
 Select the correct option  
 a) All except II                      b) All except I                      c) All except III                      d) All except IV
17. Identify the state of sarcomere in the diagram and choose the correct option accordingly



- a) A-Contracting, B-Relaxed, C-Maximally contracted
- b) A-Maximally contracted, B-Contracting, C-Relaxed
- c) A-Relaxed, B-Contracting, C-Maximally contracted
- d) A-Relaxed, B-Maximally contracted, C-Contracting

18. In *Paramecium*, cilia helps in

- a) Movement of cytopharynx
- b) Locomotion
- c) Both (a) and (b)
- d) Reproduction

19. What will happen if ligaments are cut or broken?

- a) Bones will move freely at joints
- b) No movement at joint
- c) Bone will become unfixed
- d) Bone will become fixed

20. This joint is made for power

- a) Joint between vertebrae
- b) Mandibular joint
- c) Knee joint
- d) Suture in cranium

