



BIOLOGY

NEET & AIIMS

LOCOMOTION AND MOVEMENT

Example

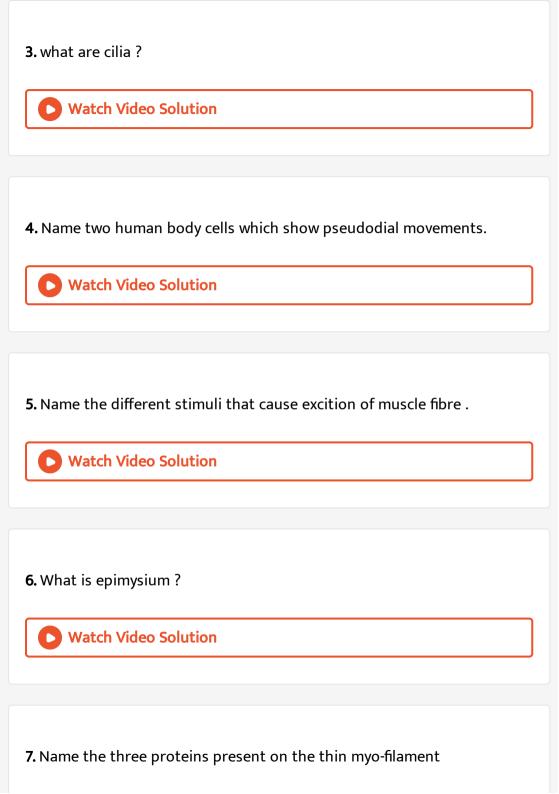
1. What is movement?



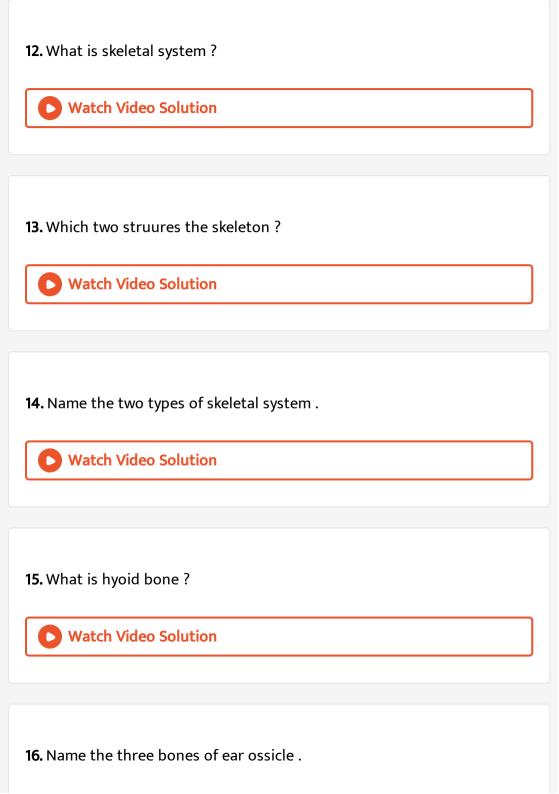
Watch Video Solution

2. Define locomotion .



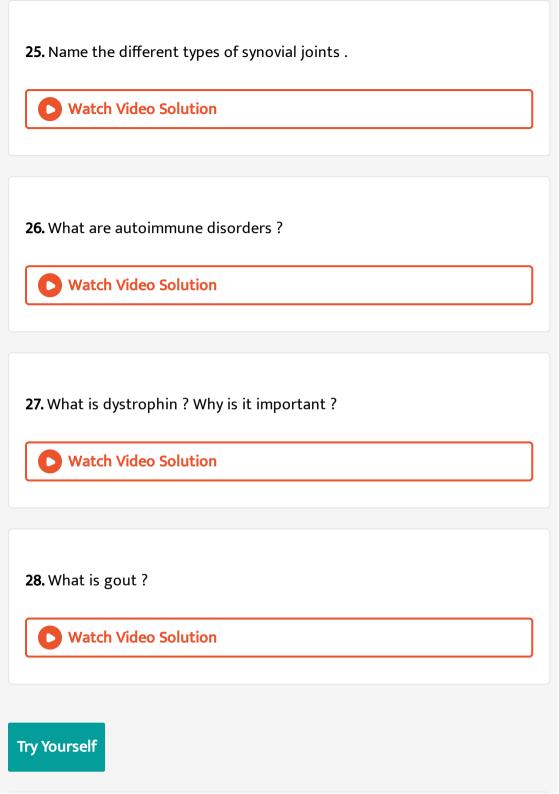


Watch Video Solution
8. which element is required for conversion of G-actin into F-actin?
Watch Video Solution
9. What does sarcomere comprises of ?
Watch Video Solution
10. Describe HMM.
Watch Video Solution
11. Name the oxygen - binding protein in the muscle?
Watch Video Solution



Watch Video Solution
17. What if formation magnum ?
Watch Video Solution
18. What is appendicular skeletion ?
Watch Video Solution
19. Name the two bones which constitute each half of the pectoral girdle .
Watch Video Solution
20. What does sarcrum and coccyx together form?
Watch Video Solution

21. Describe the hip Joint .
Watch Video Solution
22. Define Joints .
Watch Video Solution
23. What are sutures ?
Watch Video Solution
24. Which fluid is present in the cavity formed by articulation of freely
moveable joints?
Watch Video Solution



1. Which movement is involved is involved in the passage of ovum
through the oviduct ?
Watch Video Solution
2. Which of the following cells use flagella for locomotion ?

A. Spermatozoa

Watch Video Solution

3. Name the structure used By Hydra to capture to capture food.

B. Ovum

C. Alvoli

D. RBC

Answer:

4. Straming of protoplasm in Amoeba leads to the formation of
A. Cilia
P. Flagella
B. Flagella
C. Tentacles
D. Pseudopodia
Answer:
Allswell.
Watch Video Solution
Watch Video Solution
Watch Video Solution5. In human beings , the movement of limbs , jaws and tongue occurs due
Watch Video Solution5. In human beings , the movement of limbs , jaws and tongue occurs due
5. In human beings , the movement of limbs , jaws and tongue occurs due to
5. In human beings , the movement of limbs , jaws and tongue occurs due to A. Contraction and relaxation of muscle

- C. Contraction and relaxation of cilia D. Contraction and relaxation of Pseudopodia Answer: **Watch Video Solution** 6. Select the correct statement A. All locomotions are movements.
- - B. All movements are locomotions

 - C. Paramoecilm use flagella for ingesting food particles .
 - D. Hydra use flagella for locomotion

Answer:



7. Why is movement necessary in WBC and macrophages?
Watch Video Solution
8. Why are cilia present in trachea?
Watch Video Solution
9. Give and example to show that movement of internal body parts is
essential for carrting out Vital processes in organism.
Watch Video Solution
10. What is the role of cilia in paramoecium ?
Watch Video Solution

11. What are fascia?



Watch Video Solution

12. Match the following

Column-I

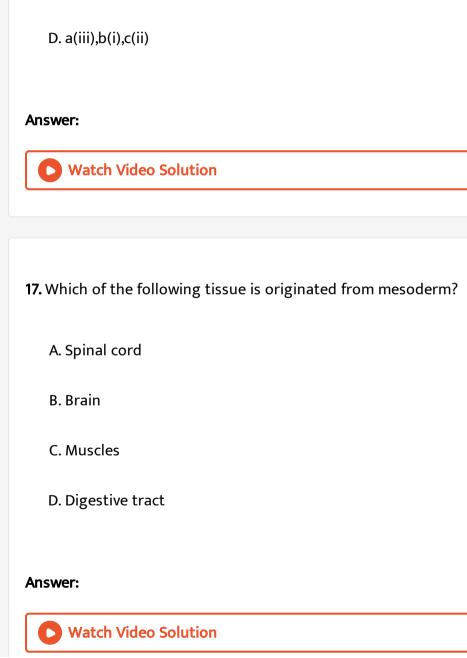
Column-II

- a. troponin T (i) Binding site for calcium
- b. Troponin I (ii) Binding site for Tropomyosin
- c. Troponin C (iii) Inhibits actin-Myosin interaction
 - A. a(ii),b(iii)c(i)
 - B. a(i) ,b(ii),c(iii)
 - C. a(iii),b(i),c(ii)
 - D. a(ii),b(i),c(iii)

Answer:



13. What are Fasciculi?	
Watch Video Solution	
14. Name the muscle which is non-s	striated involuntary and not attached
to akeketon .	
to akeneton.	
Watch Video Solution	
15. What is the location of cardiac m	iuscle ?
Watch Video Solution	
Watch video Solution	
16. Match the following	
Column-I	Column-II
a. Begining of oesophagus	(i) Skeletal muscle
b. Posterior end of oesophagusc. Heart	$egin{array}{ll} (ii) & { m Cardiac\ muscle} \ (iii) & { m smooth\ muscle} \end{array}$
c. Heat	(vvv) smooth muscle

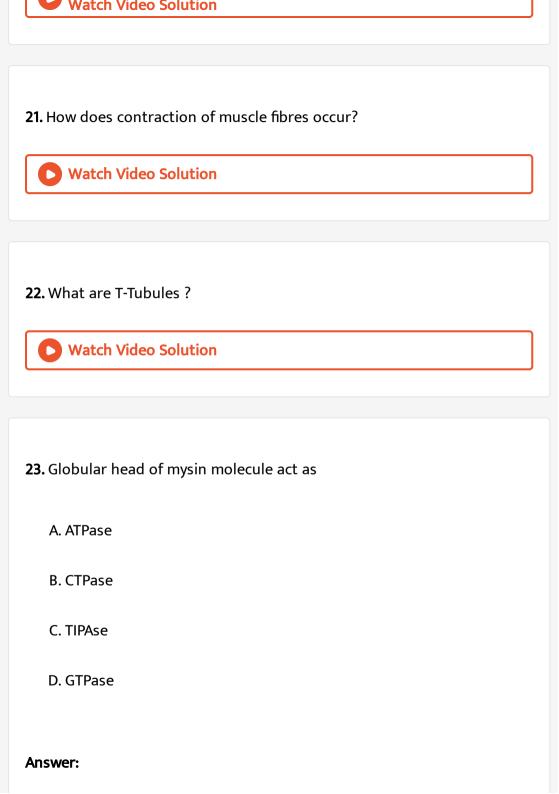


A. a(i),b(iii),c(ii)

B. a(i),b(ii),c(iii)

C. a(ii),b(iii),c(i)

18. Which of the muscle is primarily involved in locomation ?
A. Smooth
B. Cardiac
C. Tendon
D. Skeletal
Answer: Watch Video Solution
19. Which protein is present in thick flament and thin filament ?
Watch Video Solution
20. Which neurotransmitter is responible for contraction of muscle ?





24. How many bones are present in the human body?

A. 205

B. 206

C. 201

D. 200

Answer:



25. Name the two principal divisions of skeletal system present in human beings.



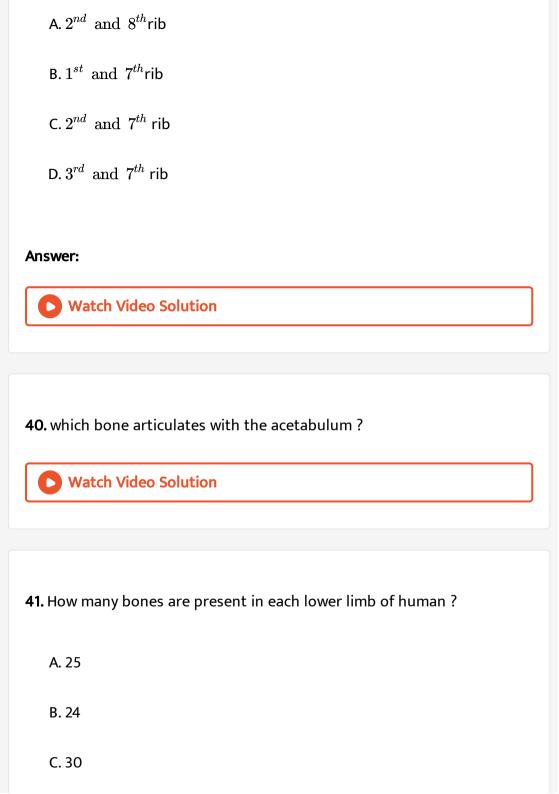
Answer: Watch Video Solution 28. Name the bone which is present at the base of buccal cavity. **Watch Video Solution** 29. how many vertebrane are present at the base busccal cavity. A. 26 B. 30 C. 20 D. 14 **Answer: Watch Video Solution**

30. Which of the following is the first vertebrae ?
A. Axis
B. Atlas
C. Sacrum
D. Coccyx
Answer:
Watch Video Solution
31. How many lumber present in vertebral column of human ?
A. 7
B. 11
C. 6
D. 5

Answer: Watch Video Solution 32. How many lumber vertebrae present in the human body? A. 12 B. 24 C. 13 D. 05 **Answer:** Watch Video Solution 33. Name the three types of ribs. **Watch Video Solution**

34. What are cervical vertebrae ?
Watch Video Solution
35. What are intervertebral discs ?
Watch Video Solution
36. The floating ribs play an important role fot the protection of
A. Buccal cavity
B. Testes
C. Kidneys
D. Ovaries
Answer:
Watch Video Solution

37. Which of the following is the hardest connective tissue ?
A. Blood
B. Cartilage
C. Areolar connective tissue
D. Bone
Answer:
Watch Video Solution
38. Why do we need appendicular skeleton ?
Watch Video Solution
39. The scapula extends on the backside of the thorax between



D. 27
Answer:
Watch Video Solution
42. What are tarsal ?
Watch Video Solution
43. How many bones forms girdle in human ?
A. 1
B. 2
C. 5
D. 4
Answer:

Watch Video Solution
44. Name the joint present in the elbow
Watch Video Solution
45. Name the cartiluage which oovers the ends of bones forming joints
Watch Video Solution
46. In cartilaginous joints , which struture joints the two bones ?
Watch Video Solution
47. Give and example of saddle joint.
Watch Video Solution

48. Which is the simplest synovial joint ?
A. Ball and socket
B. Hinge joint
C. Saddle joint
D. Gliding joint
Answer:
Watch Video Solution
49. Which of the following joint is present between staernum and ribs ?
49. Which of the following joint is present between staernum and ribs ?
49. Which of the following joint is present between staernum and ribs ? A. Cartilginous joint
49. Which of the following joint is present between staernum and ribs?A. Cartilginous jointB. Fibrous joint

Answer: **Watch Video Solution 50.** Name the structure where sutures are present . **Watch Video Solution** 51. Name the joint present between the radius and ulna **Watch Video Solution** 52. Which of the following joints allow movement in many directions?

A. Saddle joint gliding joint

C. Pivot joint and hinge joint

B. Ball and socket joint and saddle joint

D. Ball and socket joint and hinge joint
Answer:
Watch Video Solution
53. Which joint do not allow any movement ?
Watch Video Solution
54. Name the muscular disorder in which rapid or wild contraction of
muscles occurs .
Watch Video Solution
55. Which of the following is a genetic disorder?
A. Osteoporosis

B. Arthrtis
C. Gout
D. Muscular dystrophy
Answer:
Watch Video Solution
56. Which receptors are affected in myasthenia gravis?
Watch Video Solution
57. Where does uric acid deposit in gout ?
Watch Video Solution
58. In tetany patients the level of decreases in the extra cellular
matrix



59. Name the gland which produces calcitonin.



Watch Video Solution

Exercise

1. Cyclosis, A characteristic of plants cells this movement due to

A. Sliping microtububule

B. Cytoplasmic streaming

C. Beating of cilia

D. Podia formation

Answer: B



2. Sheet or band of fibrous connective tissue that is deep to the skin and entire muscles and other organs of body are

A. Epimysin

B. Fasicule

C. Endoomysium

D. Fascia

Answer: D



- **3.** Contractile unit of muscle is part of myosfibril between
 - A. X-line and I-band
 - B. Z-line and Z-line
 - C. Z- line and A-band
 - D. A-band and I- band

Answer: B



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- **4.** The number of thick myofilaments (myosin) surrounding single thin myofilament (actin) are
 - A. 3
 - B. 6
 - C. 2
 - D. 4

Answer: A



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5. At rest, when mucsle is relaxed, thin filaments interdigitate with thick filaments only

A. Outsine A-band B. Outside H-bond C. Inside A-band D. Inside M-line **Answer: B Watch Video Solution** 6. The ion that must be present in adequate amount for the binding of cross bridges with actin is A. Ca^+ B. Na^+ C. K^+ D. Mg^{+2} **Answer: A**

7. In which cateory of muscle of	f muscle	contraction	the	filament	that
move to shorten a muscle are					

- A. Skeletal muscle fibre
- B. Cardiac muscle fibre
- C. Smooth muscle fibres
- D. All of these

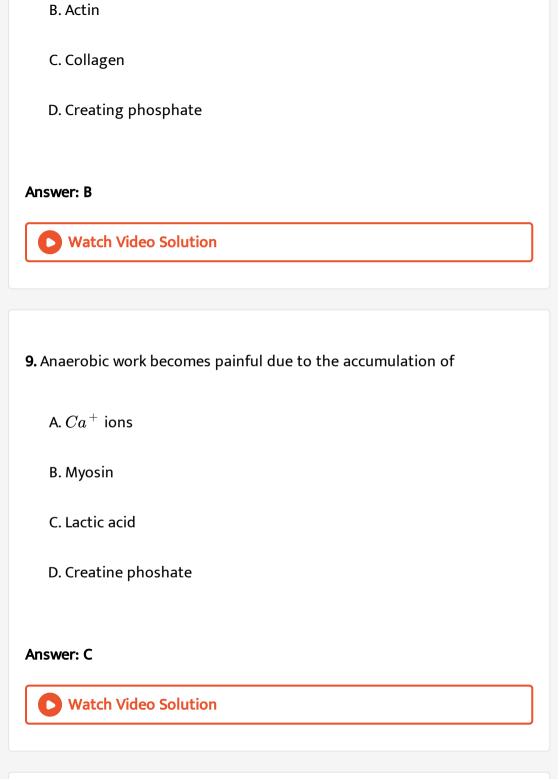
Answer: D

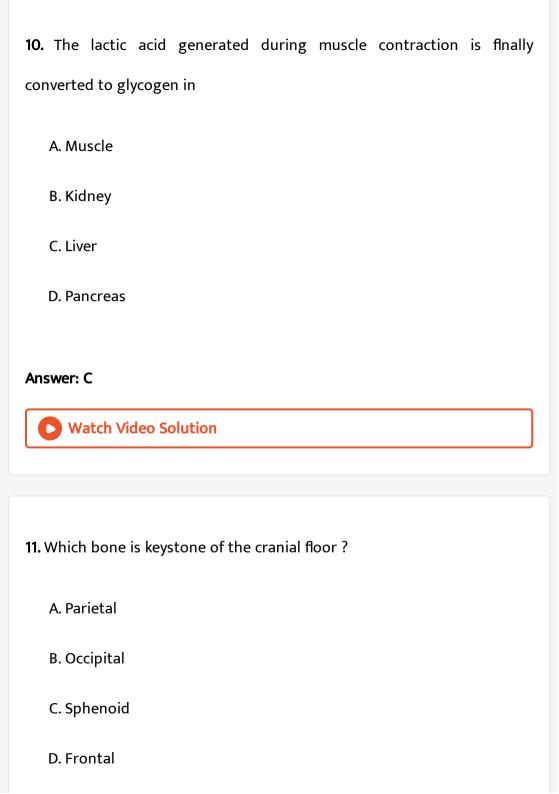


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8. According to sliding filament theory of muscle contraction, the filament that move to shorten a muscle are

A. Myosin





Answer: C Watch Video Solution 12. Which is the only movable skull bone other than auditory ossicles? A. Maxillae B. Mandible C. inferior nasal conchase D. Zygomatic **Answer: B Watch Video Solution**

13. Which if the best distinguishing feature of thoracic vertebrae?

A. They have larger transverse process

- B. Their spinous process is directed posteriorly
- C. They articular with the ribs
- D. Abence of vertebral transverse formen

Answer: C



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- **14.** Which of the following ribs are not connected ventrally with the stenum and are called as floating ribs ?
 - A. First five pairs
 - $\mathsf{B.}\,8^{th},\,9^{th} \;\; \mathrm{and} \;\; 10^{th}\mathsf{pairs}$
 - $\mathsf{C.}\ 11^{th}\ \mathrm{and}\ 12^{th}\mathsf{pair}$
 - D. 7^{th} , 8^{th} and 9^{th} pairs

Answer: C



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15. Which part can be easily felt as high point of shoulder?
A. Sterno - clavicle joint
B. Acromian-Clavicle joint
C. Gleno- clavicle joint
D. Superior angle of scapula
Answer: B
Watch Video Solution
16. During walking talus Passes/transmits about the half of the weight of
16. During walking talus Passes/transmits about the half of the weight of body to
body to

D. Navicular

Answer: C



Watch Video Solution

- **17.** A cricket player is fast chasing ball in the field. Which one of the following group of bones is directly contributing in this movement?
 - A. Femur , Malleus tibia metatarsals
 - B. Tarsals , fermuar , metatarsals tibia
 - C. Pelvis , ulna , patella tarsals
 - D. Sternum femur tibia fibula

Answer: B



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18. Lower jaw is made up to
A. Mandible
B. Vomer
C. Maxilla
D. Palatine
Answer: A
Watch Video Solution
19. Sella turcica, a depression enclosing the pituitary gland is found in
A. Temporal bone
B. Parietal bone
C. Sphenoid bone
D. Frontal bone

Answer: C Watch Video Solution

20. Odontoid process is present with which vertebrae of vertabral column ?

- A. Atlas vertebrae
- B. Axis vertebrae
- C. Vertebrae prominens
- D. Lumber vertebrae

Answer: B



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21. How many vertebra-chondral ribs are present in the human?

A. 7 pairs B. 2 pairs C. 3 pairs D. 12 pairs **Answer: C Watch Video Solution** 22. Glenoid cavity is associated with A. Pelvic girdle B. Coracoid C. Clavicle D. Scapula **Answer: D Watch Video Solution**

23. Which one of the following is called hip bone?
A. Innominate
B. Scapula
C. Manubrium
D. Coracold
Answer: A
Watch Video Solution
24. Saddle joint is present between
A. Radius and ulna
B. Carpals
C. Carpal and metacarpal of thumb

D. Ulna and humerus	
Answer: C	
Watch Video Solution	
25. Hinge joint is present between	
A. Humerus and Radio -Ulna	

B. Femur and Pelvic girdle

C. Femur and Acetabulum

Watch Video Solution

Answer: A

D. Humerus and pectoral girdle

26. Which of the following movements in mammalian skeleton represent the leverage of the third order ltbgt (force applied at a point between fulcrum and the point of resistance)?

- A. Biceps thuscle flexing arm at elbow
- B. Triceps muscle extending arm at elbow
- C. Gastrocnemius muscle raising weight of body on toes
- D. Movement of the head of femur in the acetabulum of pelvic girdle

Answer: A



- **27.** Which of the following abnoromalities will include the secretion of abnormal granules-pannus?
 - A. Osteoarthritis
 - B. Rheumatoid arthritis

C. Gout
D. Osteoporsis
Answer: B
Watch Video Solution
28. The cells responsible for the resorption of bone matrix
during the growth and remodeling of the skeleton are called
A. Osteoblasts
B. Osteclasts
C. Chondroblasts
D. Chondroclasts
Answer: B
Watch Video Solution

29. When a bone breaks into more than two pieces, such a fracture is called

A. simple fracture

B. Green stick fracture

C. Comminuted fracture

D. Compound fracture

Answer: C



Watch Video Solution

30. Bone formed by the ossification of tendon is called as

A. Sesamoid

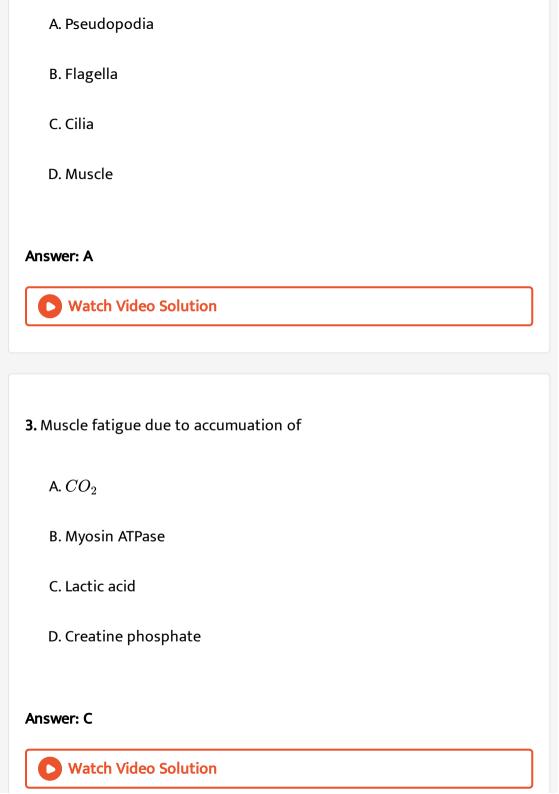
B. Cartilage or replacing bone

C. Investing or replacing bone

D. Membranous bone

Answer: A Watch Video Solution **Assignment Section A** 1. The movements which results in change of place or location constitutes A. Locomotion B. protoplasmic streaming C. Vital movement D. Elasticity Answer: A **Watch Video Solution**

2. Amoeba shows movement with help of



4. The number of floating ribs is
A. 2 pairs
B. 12 pairs
C. 7 pairs
D. 3 pairs
Answer: A
Watch Video Solution
5 circulates blood to different parts of the body .
A. Peristaltic movement of oesophagus
B. Pumping of heart
C. Peristaltic movement of intestine

D. Ciliary movement of oviduct
Answer: B
Watch Video Solution
5. Which of the following is not a function of locomotion ?
A. Procurement of food
B. Finding mate
C. Peristaltic movements
D. Searching and building of shelter
Answer: C
Watch Video Solution
7. The cells of the body which show pseudpodial movement are

A. RBC and WBC B. WBC and macrophages C. Liver cell and WBC D. Marcrophages and liver cell **Answer: B Watch Video Solution** 8. Which of the following structures contract and relax rhythically to produce movement? A. Flagella B. Cilia C. Muscles D. Pseudopodia Answer: C



- **9.** The muscle is a specuialised tissue which is originated from
 - A. Endoderm
 - B. Mesoderm
 - C. Ectoderm
 - D. Yolk sac

Answer: B



- 10. The specialised cells that make the muscular tissue are
 - A. Neuroblast
 - B. Osteoblast
 - C. Osteocytes

D. Myocytes
Answer: D
Watch Video Solution
11. A human body contains how many muscles ?
A. 640
B. 639
C. 600
D. 700
Answer: B
Watch Video Solution

12. A collagenous connective tissue layer hold the muscle bundles together.
A. Perimysin

B. Endomysium

C. Epimysium

D. Fascia

Answer: D



13. A bundle of muscle fibre is called

A. Fascia

B. Glenoid cavity

C. myocyte

D. Fasciculus

Answer: D Watch Video Solution 14. The sheath covering the bundle of muscle fibres is A. Epimsium B. Endomysium C. Perimysium D. Mesoderm **Answer: C** Watch Video Solution 15. Tendons connects A. Muscle to bone

C. Bone to bone D. Bone to cartillage Answer: A **Watch Video Solution** 16. The plasma membrane of the muscle fibre is called A. Sarcoplasma B. Sarcolemma C. Sarcoplasmic Reticulum D. Syncytial Answer: B **Watch Video Solution**

B. Bone to vertebral column

17. The dark band present on myofibril is
A. Isotropic band
B. Anisotropic band
C. Hensen's Zone
D. M-line
Answer: B
Watch Video Solution
18. M-line passes through the sentre of
18. M-line passes through the sentre of A. Z-disc
A. Z-disc
A. Z-disc B. I-band

Answer: D Watch Video Solution

19. The structural and functional unit of myofibrill which contracts to cause movement is called

- A. Sarcolemma
- B. Sarcomere
- C. Fascia
- D. Myosin

Answer: B



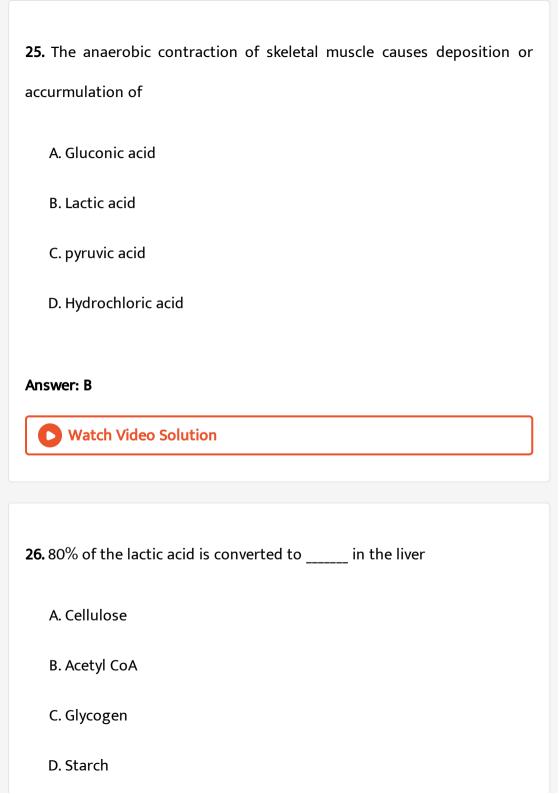
Watch Video Solution

20. A sarcomere comsists of

A. One A-band and one I-band B. HalfA band and two half I-band C. Half A -band and one I- band D. One A -band and two half I -band **Answer: D Watch Video Solution** 21. Which of the protein is not a part of thin myofiament? A. myosin B. Actin C. troponin D. Tropormyosin Answer: A **Watch Video Solution**

22. The monomeric protein which polymerises to form myosin is
A. Actin
B. Meromyosin
C. Tropomtosin
D. Troponin
Answer: B
Watch Video Solution
23. Select the correct option
A. HMM=Tail+ short arm
B. LMM=Tail + Head
C. HMM=Head+short arm

D. LMM=Head	
Answer: C	
Watch Video Solution	
24. ATP binding site is located on the	
A. Tropomyosin	
B. Actin	
C. Myosin	
D. Troponin	
Answer: C	
Watch Video Solution	



Answer: C



27. The number of bones present in the skeleton that runs along the middle longitudinal axis of the body is

A. 87

B. 90

C. 80

D. 78

Answer: C



Watch Video Solution

28. Cranium protects the brain is mode up of

A. 9 bones
B. 18 bones
C. 28 bones
D. 8 Bones
Answer: D
Watch Video Solution
29. Head of humerus articulates with cavity
A. Glenoid
B. Acetabulum
C. Foramen magnum
D. Obturator formation
Answer: A
Watch Video Solution

30. Match the following

Column-l

- a. Incus
- b. Malleus
- c. Stapes
 - A. a(iii),b(ii),c(i)
 - B. a(ii),b(i),c(iii)
 - C. a(i),b(iii),c(ii)
 - D. a(iii),b(i),c(ii)

Answer: D



Watch Video Solution

Column-II

- (i) Hammer shaped
- (ii) Stirrup shaped
- (iii) Anvil shaped

31. The U -shaped bone present at the base of buccal cavity is

A. Skull
B. Hyoid
C. Incus
D. Stapes
Answer: B
Watch Video Solution
32. The longest bone of the thigh is
A. Phalanges
B. Tarsal
C. Femur
D. Metatarsal
Answer: C
Watch Video Solution

33. Match the following

Column I

Column II

a. Tarsal

(i) 14

b. Phalanges

(ii) 1

c. Meta tarsal

(iii) 7

d. Femur

. (iv) 5

- A. a(iii),b(i),c(iv),d(ii)
- B. a(i),b(ii),c(iii),d(iv)
- C. a(ii),b(iii),c(iv),d(i)
- D. a(iv),b(i),c(iii),d(ii)

Answer: A



Watch Video Solution

34. The joint present between radius and ulna is

A. Gliding joint
B. Saddle joint
C. Pivot joint
D. Angular joint
Answer: C
Allower, C
Watch Video Solution
35. In Myasthenia gravis is affected .
A. Sarcoplasmic reticulum
B. Sarcolemma
C. Neuromuscular junction
D. T-Tubules
Answer: C
Watch Video Solution

Assignment Section B

- 1. Select the true statement
 - A. A band is present in the middle of sarcomere
 - B. H zone is present in the middle of A band
 - C. M line is present in the middle of H-Zone
 - D. All of these

Answer: D



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- **2.** During muscle contraction in a sjeletal muscle fibre $Ca^{2\,+}$ combines

A. T_PT

with

B. T_PC
$C.T_PI$
D. Tropomyosin
Answer: B
Watch Video Solution
3. The contraction of muscle of shortest duration is seen in
A. Jaws
B. Eye lids
C. Heart
D. intestine
Answer: B
Watch Video Solution

4. In a contracted skeletal muscle fiber,
A M line disease
A. M line disappears
B. H-zone elongates
C. I-band remains constant
D. A - band disappears
Answer: A
Watch Video Solution
5. One of the following ions is essential for muscular contraction
$\Lambda N_a + C_a + +$

B. $Mg^{\,+\,+}\,,\,Ca^{\,+\,+}$

C. $Mg^{+\,+}$, $K^{\,+}$

D. K^+, Na^+

Answer: B



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6. The potential difference across the membrane of a relaxed muscle fibre is called resting potential ,It amounts to about

$$\mathsf{A.}-70mV$$

 $\mathsf{B.}\,50MV$

 $\mathsf{C.}\,100mV$

 $\mathsf{D.}\,50-100mV$

Answer: A



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7. In which one of the following functions, white muscles are not used?

A. Moving of eye balls B. Fast and strenuous work for short duration C. For sustained work at a slow rate for a prolonged duration D. Fast flights as in sparrows **Answer: C Watch Video Solution** 8. Cori cycle involves A. Liver B. Muscles C. Liver and Muscles both D. None of these Answer: C **Watch Video Solution**

9. Which one of the following is a viral disease that weakens the muscles?
A. Atrophy
B. Poliomylitis
C. Dystrophy
D. Muscular hypertrophy
Answer: B
Watch Video Solution
10. The backward bending of the shank is worked out by
A. Gluteus maximus
B. Quadriceps femoris muscles
C. Adductor group of muscles

D. Gastrocnemius and hamstrings
nswer: D
Watch Video Solution
1. Which one is not the character of red skeletal muscles ?
A. Smaller diameter
B. More mitrochondira
C. More sarcoplasmic reticulum
D. More blood capillaries
nswer: C
Watch Video Solution

12. Which of the following is an example of multiunit smooth muscles?

A. Smooth muscle in uterine wall B. Smooth muscle with the intestine C. Masseter muscle of the jaw D. Arrector pili muscle of skin Answer: D **Watch Video Solution 13.** Least blood supply will be present in : -A. Skeletal muscle B. Smooth muscle C. Cardiac muscle D. None of these Answer: B **Watch Video Solution**

14. Foramen magnum is associated with which bone?
A. Frontal
B. Parietal
C. Temporal
D. Occipotal
Answer: D
Watch Video Solution
15. Tongue bone is
A. Mandible
B. Hyoid
C. Flat bone

D. Coccyx	
Answer: B	
Watch Video Solution	
16. The number of anterior curves present with human vertebral column s	
A 2	

B. 4

C. 6

D. 1

Answer: A

17. The heaviest and largest vertebrae are
A. Thoracic
B. Lumbar
C. Cervical
D. Sacral
Answer: B
Watch Video Solution
18. Type of vertebrae in case of human is
18. Type of vertebrae in case of human is A. Amphiplatyan
A. Amphiplatyan
A. Amphiplatyan B. Procoelus

Answer: A Watch Video Solution 19. Deltoid ridge is found in which one of the following bones A. Radius B. Tibia C. Femur D. Humerus **Answer: D** Watch Video Solution 20. Olecranon fossa is present over A. Radius

B. Ulna C. Humerus D. Femur Answer: C Watch Video Solution 21. Phalangeal formula for the hand is A. 23333 B. 33333 C. 33322 D. 32333 **Answer: A Watch Video Solution**

A. llium, ischium and pubis B. Ischium and pubis C. lium and ischium D. Ilium and pubis **Answer: B Watch Video Solution** 23. Which of the following are involved in the formation of acetabulum? a. Ilium b. ischium c. pubis A. a & b only B.b&conly

22. Obturator formen is enclosed between

D. a ,b & c
Answer: D
Watch Video Solution
24. Which of the following muscles are not under the voluntary control of
nervous system ?
A. Pharynx
B. Urinary bladder
C. Anterior end of oesophagus
D. Tongue
Answer: B
Watch Video Solution
J

C. a & c only

25. Mark the odd one w.r.t girdle bones
A. Clavicle
B. Ischium
C. lleum
D. Pubis
Answer: C
Watch Video Solution
Assignment Section C
1. The pivot joint between atlas and axis is a type of
A. Fibrous joint
B. Cartilaginous joint
C. Synovial joint

D. Saddle joint

Answer: C



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2. Out of 'x" paris of ribs in humans only 'Y' Pairs are true ribs selecet the option that correctly represents values of X and Y and provides their explanation



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3. Name the ion responsible for masking active sites for myosin for cross-bridge activity during muscle contraction

A. Calcium

B. Magnesium

C. Sodium

D. Potassium

Answer: A



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- **4.** Osteoporosis, an age related disease of skeletal system, may occue due to
 - A. Immune disorder affecting neuromuscular junction leding to fatigure
 - B. High concentration of $Ca^{+\,+}$ and Na^{+}
 - C. Decreased level of estrogen
 - D. Accummation of joints

Answer: C



5. Lack of relaxation between successive stimuli in striated muscle
contraction is known as
A. Tonus
B. Spasm
C. Fatigue
D. Tetanus
Answer: D
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6. Which of the following is not a function of the skeletal system
6. Which of the following is not a function of the skeletal system
6. Which of the following is not a function of the skeletal system A. Locomotion

Answer: D



- 7. Which of the following joints would allow no movement
 - A. Ball and socket jkoint
 - B. Fibrous joint
 - C. Cartilaginous joint
 - D. Syncytial joint

Answer: B



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8. Sliding filament theory can be best explained as

- A. When myfilaments slide pass each other myosin filaments shorten while actin filaments do not shorten
- B. When myfilaments slide pass each other actin filaments shorten while myosin filaments do not shorten
- C. Actin and myosin filaments shorten and slide pass each other
- D. Actin and myosin filaments do not shorten but rather slide pass

Answer: D



- **9.** Glenoid cavity articulates
 - A. Humerus with scapula
 - B. Clavicle with acromion
 - C. Scapula with acromion

D. Clavicle with scapula

Answer: A



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10. Select the correct matching of the type of the joint with the example in human skeletal system

- Type of joint Example
- Cartilahinous joint Between frontal and parietal
- Type of joint Example
- Between third and fouth cervical vertebrae Pivot joint
- Type of joint Example
- C. Hinge joint Between humerus and pectoral girdle
- Type of joint Example Gliding joint Between carpals

Answer: D



- 11. Stimulation of a muscle fibre by a motar neuron occurs at
 - A. The neuromuscular junction
 - B. The transverse tubules
 - C. The myofibrill
 - D. The sarcoplasmic reticulum

Answer: A



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12. The characteristics and an example of a symbol joint in humans is

Characterstics Example Gliding joint (a) Lymph filled between two bones, limited movement

- (b) Fluid cartilage between two bones, limited movements
- Knee joint (c)Fluid filled between two joints, provides cushion
- (d)Joint betwee Fluid filled synovial cavity between two bones

Skull bones

A.

Examples Characteristics

Skull bones Fluid filed between two joint, provides cushion

В.

Characteristics Examples

Fluid filled synovial cavity between two bones Joint between

C.

Characteristics Examples

Lymph filled between two bones limited movement Gliding join

D.

Characteristics Example
Fluid cartilage between two bones limited movements Knee join

Answer: B



- **13.** Select the correct statement with respect to locomotion in humans :
- A. Accumulation of uric acid crystals in joints causes their inflammation .
 - B. The vertebral column has 10 thoracic vertebrae
 - C. The joint between adjacent vertebrae is a fibrous joint

D. A decreased level of progesterone causes osteoporosis in old people

Answer: A



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- 14. The H-zone in the skeletal muscle fibre is due to
 - A. The central gap between myosin filaments in the A-band
 - B. The central gap between actin filaments extending through myosin

C. Extension of myosin filaments in the central portion of the A - band

- D. The alternative of the classic fields and the control of the co
- D. The absence of myofibrils in the central portion of A-band

Answer: B



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filaments in the A-band

15. Three of the following pairs of the human skeletal parts are correctly matched with their respective inclesive skeletal category and one pair is not matched Identify the non-matching pair

Pairs of skeletal Parts Category

A. Humerus and Ulna Appendicular skeleton

Pairs of skeletal Parts Category

Malleus and Stapes Ear ossicles

Pairs of skeletal Parts Category

C. Sternum and Ribs Axial skeleton

Pairs of skeletal Parts Category

Clavicle and Glenoid cavity Pelvic girdle

Answer: D



- 16. The type of muscles present in our
 - A. Thigh are striated and voluntary
 - B. Upper arm are smoth muscle fibres Fusifrom in shape
 - C. Heart are involuntary and unstriated smooth muscles

D. Interstine are striated and involuntary
Answer: A
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17. Low Ca^+ in the body fluid may be the cause of
A. Gout
B. Tetany
C. Anaemia
D. Angina pectoris
Answer: B

18. Which one of the following pairs of structures is correctly matched with their correct description

Structures Description

A. Tibia and fibula Both form parts of knee joint

В.

Structures Description

Cartilage and cornea No Blood supply but do require oxygen for

C.

Structures Description

Shoulder joint and elbow joint Ball and socket type of joint Structures Description

Premolars and molars 20 in all and 3 rooted

Answer: B



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19. Which one of the following is the correct description of a certain part of a normal human skeleton ?

A. Parietal bone and the temporal bone of the skull are joined by

fibrous joint

B. First vertebra is axis which articulated with the iccipital condyles

C. The 9^{th} and 10^{th} pairs of ribs called the floating ribs

D. Glenoid cavity is a deprssion to which the thigh bone articulates

Answer: A



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20. Which one of the following is correct paring of a body part and the kind of muscle tissue that moves it ?

A. Biceps of upper arm - Smooth muscle fibres

B. Abdominal wall - Smooth muscle

C. Iris - involuntary smooth muscle

D. Heart wall - Involuntary unstriated muscle

Answer: C



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21. Which one of the is the correct matching of three items and their grouping category?

- A Items Group
- llium, ischium, pubis -Coxal bones of pelvic girdle
- Items Group
- B. Actin, myosin, rhodopsin Muscle proteins
- Items Group
- Guanine, uracil, thiamine -Pyrimidines
- Items Group
- Malleus ,incus , Cochlea -Ear ossicles

Answer: A



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22. Elbow joint is an example of

B. Gliding joint C. Ball and soket joint D. Pivot joint Answer: A **Watch Video Solution** 23. Which one of the items gives its correct total number? A. Cervical vertebrae in humans -8 B. Floating ribs in humans-4 C. Amino acids found in proteins -16 D. Types of diabetes -3 Answer: B **Watch Video Solution**

A. Hinge joint

24. In human body , which one of the following is anatomically correct ?
A. Cranial nerves -10 pairs
B. Floating ribs -2 pairs
C. Collar bones -3 pairs
D. Salivary glands - 1 pairs
Answer: B Watch Video Solution
25. The contractile protein of skeletal muscle involving ATPase activity is
A. Tropomyosin
B. Myosin
C. $lpha$ -Actinin

Answer: B
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26. An acromian process is characieristically found in the
A. Pelvic girdle of mammals
B. Skull of frog
C. Pectoral girdle of mammals
D. Sperm of mammals
Answer: C
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27. Which of the following pairs is correctly matched?

D. Troponin

- A. Cartilagenous joint Skull bones
- B. Hinge joint -Between vertebrae
- C. Fibrous joint -Between phalanges
- D. Gliding joint -Between zygophyses of the successive vertebrae

Answer: D



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- 28. Which of the following are the regulatory protein in the muscle contraction?
 - A. Troponin and tropomyosin
 - B. Troponium and actin
 - C. myosin and tropomyosin
 - D. Actin and tropomyosin

Answer: A

29. Source of $Ca^{+\,+}$ for muscle contraction is both sarcoplasmic (endoplascmic) reticulum as well as extracellular fluid in case of

a. Skeletal muscles

b. Smooth musclesC. Cariac muscles

A. A only

B. b and c only

C. a and c only

D. b only

Answer: B



30. Which of the following in not applicable to red muscle fibes when compared to white Muscle fibres ?

- A. Sustained contraction for long periods
- B. Rich in myoglobin
- C. Faster in contraction rate
- D. Rate in mitochondria

Answer: C



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31. What is common between the muscle fibers of extensor of human back and those of flight muscles of the birds which remain in flight for long periods of time?

- a. They are thinner , red colored
- b, they are thicker and light colored .
- c. they have abundant mitochondria .

- d. they have well developed sarcoplasmic reticulum

 e. they show rate of contractions for longer periods

 f, They show fast stenous activity

 g. They do not get fatigued early .

 h. They get fatigued quickly .

 A. a,c,e,g ,are common

 B. b,d,f,h are common
 - C. All features are common at different times
 - D. a,c,f,g are common

Answer: A



- 32. During muscle contraction which of the following does not occurs?
 - A. No change in length of isotropic band
 - B. Decrease in length of isotroopic band

- C. No change in length of A band
- D. decrease in length of actin myofilaments

Answer: D



33. What would happen if ATP suddenly were not available after the sarcomere had started to shorten?

- A. Cross bridges would not be able to detach from actin
- B. Muscle would remain in a state of rigidity
- C. Muscle would relax immediately
- D. Both (1) & (2)

Answer: D



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34. Select the correct statement regarding the specific disorder of musclular or skeletal system.

A. Myasthenia gravis -Auto immune disorder which inhinbits sliding of myosin filaments

B. Gout- inflammation of joint due to extra deposition of calcium

C. Muscular dystrophy - age related shortening of muscles

D. Osteoporosis - decrease in bone mass and higher chanes of fractures with advancing age

Answer: D



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35. Myasthenia gravis involves weakness of skeletal muscles . Which of the following can act as a primary treatment of it ?

A. injection of neurotransmitter acetycholine

C. Injection of acetyicholinesterase inhibitor
D. Taking protein rich diet
Answer: C
Allower. C
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36. The clavicle articulates with of scapula .
A. Acromion process
B. Glenoid cavity
C. Acetabulum cavity
D. Ball and socket joint
Answer: A
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B. Injection of neurotransmitter adrenaline

37. Stemum is connected to ribs by
A. Bony matter
B. White fibrous cartilage
C. Hyaline cartilage
D. Areolar tissue
Answer: C
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38. Which is part of pectoral girdle ?
38. Which is part of pectoral girdle? A. Stemum
A. Stemum
A. Stemum B. Acetabulum

Answer: C Watch Video Solution 39. Total number of bones in limb of a tendon is called A. 24 B. 30 C. 14 D. 21 **Answer: B** Watch Video Solution 40. Bone formed by ossification of tendon is A. Sesamoid bone

C. Investing bone D. Replacing Bone Answer: A **Watch Video Solution** 41. The joint between atlas and axis is called A. Angular joint B. Hinge joint C. Pivot joint D. Saddle joint **Answer: C Watch Video Solution**

B. Cartilage bone

42. In which of the following fracures ,the bone is broken into more than two fragments with some of the fragments losing connection with blood circulation ?

- A. Compound fracture
- B. Greenstick fracture
- C. Comminuated fracture
- D. Simple fracture

Answer: C



- **43.** Formation of abnormal graanuls called pannus are secreted by synovial membrane in case of
 - A. Osteoarthritis
 - B. Rheumatoid arthritis

C. Gout

D. Osteomyelitis

Answer: B



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Assignment Section D

1. Assertion: Maximum movement is possible at the amphiarthrosis joint.

Reason: Such joint are also called synovial joints and have almost frictionless movement due to synovial fluid.

A. IF both Assertion & Reason are true and the reason is the correct

explanation of the assertion , then mark

B. If Both Assertion & Reason are true but the reason is not the

correct exlanation of the assertion then mark

C. IF Assertion is true statement but Reason is false then mark

D. If both Assertion and Reason are false statements then joint

Answer: D



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2. Assertion : Ca^{2+} plays important role in the muscle contraction.

Reason : $Ca^{2\,+}$ Combines with troponin chain, displacing tropomyosin allowing the myosin head part to combine with actin to from actomyosin complex .

A. IF both Assertion & Reason are true and the reason is the correct explanation of the assertion , then mark

B. If Both Assertion & Reason are true but the reason is not the correct extanation of the assertion then mark

C. IF Assertion is true statement but Reason is false then mark

D. If both Assertion and Reason are false statements then joint

Answer: A



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3. Assertion: — On repeated application of stimuli, involuntary stripled muscles undergo fatigue.

Reason: This is due to non availability of ATP molecules.

A. IF both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark

B. If Both Assertion & Reason are true but the reason is not the correct exlanation of the assertion then mark

C. IF Assertion is true statement but Reason is false then mark

D. If both Assertion and Reason are false statements then joint

Answer: D



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4. Assertion: All muscle follow "all or none" principle.

Reason: All muscles contract either fully or do not contract at all depending upon the threshold stimulus availability.

A. IF both Assertion & Reason are true and the reason is the correct explanation of the assertion , then mark

B. If Both Assertion & Reason are true but the reason is not the correct exlanation of the assertion then mark

C. IF Assertion is true statement but Reason is false then mark

D. If both Assertion and Reason are false statements then joint

Answer: D



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5. Assertion: Tibia is stronger and inner whereas fibula is the slander and outer bone of lower leg or shank.

Reason: Tibia has a sharp crest in the shaft and a projection on the inner side of ankle of ankle called lateral malleolus.

A. IF both Assertion & Reason are true and the reason is the correct explanation of the assertion , then mark

B. If Both Assertion & Reason are true but the reason is not the correct exlanation of the assertion then mark

C. IF Assertion is true statement but Reason is false then mark

D. If both Assertion and Reason are false statements then joint

Answer: C



6. A: In case of gout , inflammation of a skeletal joint may immobilize the movement of the joint

R: Uric acid crystals in the joint cavity and ossicification of articular cartilage lead to this .

A. IF both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark

B. If Both Assertion & Reason are true but the reason is not the correct exlanation of the assertion then mark

C. IF Assertion is true statement but Reason is false then mark

D. If both Assertion and Reason are false statements then joint

Answer: A



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7. A: Sella tursica is located in the skull which lodes the pituitary gland.

R: IT is a depression present in sphenoid bone.

A. If both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark

B. If Both Assertion & Reason are true but the reason is not the

correct extanation of the assertion then mark

C. If Assertion is true statement but Reason is false then mark

D. If both Assertion and Reason are false statements then mark

Answer: B



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like holding the book.

8. A: Muscle tetanus is the phenomenon of sustained contraction of a muscle due to succession of nerve impulse/stimuli being received by it

R: Many of our daily activities are due to tetanic contraction of muscles

A. IF both Assertion & Reason are true and the reason is the correct explanation of the assertion, then mark

B. If Both Assertion & Reason are true but the reason is not the correct extanation of the assertion then mark

- C. IF Assertion is true statement but Reason is false then mark
- D. If both Assertion and Reason are false statements then joint

Answer: B



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- **9.** A: Application of stimuli repeatedly just at the start of relaxation of a muscle fibre shows an increase in the extent of contraction initially and results in treppe or stair case phenomenon .
- R: It can be attributed to the summation effect of the sub threshold stimuli being given again and again .
 - A. IF both Assertion & Reason are true and the reason is the correct explanation of the assertion , then mark
 - B. If Both Assertion & Reason are true but the reason is not the correct extanation of the assertion then mark
 - C. IF Assertion is true statement but Reason is false then mark

D. If both Assertion and Reason are false statements then joint

Answer: C



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10. A: Latent period is the interval between the application of appropriate stimulus and intitiation of contraction .

R: Latent period is minmum in cardiac muscle fibres .

A. IF both Assertion & Reason are true and the reason is the correct explanation of the assertion , then mark

B. If Both Assertion & Reason are true but the reason is not the

correct exlanation of the assertion then mark

C. IF Assertion is true statement but Reason is false then mark

D. If both Assertion and Reason are false statements then joint

Answer: B

