



BIOLOGY

BOOKS - MODERN PUBLICATION

LOCOMOTION AND MOVEMENT

Exercise

1. Name two muscles of human body which are ectodermal in origin.



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2. What are myofibrils?



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3. Why do the muscle cells and nerve cells not have power of growth and regeneration?



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4. Name three types of muscles found inside the human body.



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5. List two structural differences between striated and unstriated muscles fibres.



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6. What is structural and functional unit of a muscle fibre?



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7. What do you mean by stratification of muscle fiber?



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8. Differentiate A-band and I-band.



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9. Write two structural adaptations in striated muscle fibres to draw more energy.



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10. Why are striated muscles called skeletal muscles ?



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11. What do you mean by single - unit smooth muscles?



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12. List two structural peculiarities of cardiac muscle fibres.



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13. What is Z-line? Give its function.





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14. What is sarcoplasmic reticulum?



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15. Why we shiver during winter months?



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16. Name the most accepted theory of muscle contraction.



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17. Give the value of rest potential in polarized muscle fibre.



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18. Explain biochemical changes during muscle contraction.



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19. How is action potential generated?



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20. Name two energy sources for muscle contraction.



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21. What is the function of Ca^{++} in muscle contraction?



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22. What is the cause of muscle fatigue? How is it removed?



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23. Which type of skeletal flight muscles are found in kite?



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24. What is myoglobin?



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25. Who proposed sliding filament theory of muscle contraction?





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26. Name two types of elements of human skeleton.



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27. What are the number of bones in axial and appendicular skeleton of man?



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28. Which part of human skeleton forms the helmet for the protection of human brain?



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29. Through which aperture ,brain is continuous with spinal cord?



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30. Which type of jaw suspension is found in man?



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31. Name the tongue bone.



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32. Give the vertebral formula of man.



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33. Which vertebra has an odontoid process?



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34. What is the function of odontoid process?



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35. Name a vestigial bony part of human skeleton.



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36. Give the function of intervertebral discs.



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37. Give the number of true, false and floating ribs in man.



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38. Name the breast bone.



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39. Name two bones of a pectoral girdle of man.



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40. Give the position of glenoid cavity.



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41. Name three bones of a pelvic girdle of man.



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42. Which cup lies at the junction of 3 bones of pelvic girdle?



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43. On which bone, deltoid ridge is present?



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44. What are carpals and tarsals?



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45. What is patella?



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46. What is arthritis? What are the causes of arthritis? Define sprain.



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47. What is osteoporosis?



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48. Name the autoimmune disease of body muscles.



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49. Define rigor mortis.





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50. What is the function of pubic symphysis?



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51. Why are the sutures immovable?



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52. Which type of joint lies at the shoulder joint and hip joint?



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53. List two sites with hinge joint.



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54. Define gene



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55. What is the cause of muscular dystrophy?



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56. Volkmann's canals occur in:

A. Cartilage

B. Bone

C. internal ear

D. Liver

Answer:



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57. ATPase enzyme needed for muscle contraction is located in:

A. Myosin

B. Actin

C. Actinin

D. Troponin

Answer:



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58. Total number of bones found in right upper limb is:

A. 25

B. 26

C. 30

D. 60

Answer:



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59. Nucleus pulposus occurs in:

A. Brain

B. Liver

C. Kidney

D. Intervertebral discs

Answer:



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60. Correct order of ear ossicles in rabbit is:

- A. Incus, stapes, malleus
- B. Malleus, incus, stapes
- C. Malleus, stapes, incus
- D. Incus, malleus, stapes

Answer:



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61. Ribs attached to sternum are:

A. First seven pairs

B. All ten pairs

C. First ten pairs

D. First five pairs

Answer:



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62. Which of the following lubricates ligament and tendon and is the important constituent of synovial fluid?

A. Pectins

B. Lipids

C. hyaluronidase

D. Hyluronic acid

Answer:



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63. The joint of radio-ulna with the upper arm is:

- A. hinge joint
- B. Pivot joint
- C. Socket joint
- D. None of these

Answer:



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64. Name the type of joint between the following: between public bones in the pelvic girdle

A. Ball and socket

B. Pivot

C. Saddle

D. Hinge

Answer:



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65. Write the biological importance of the following:

Synovial joints

- A. Pivot joint
- B. Fibrous joint
- C. Ball and socket joint
- D. All of these

Answer:



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66. acts as a shock absorber to cushion when tibia and femur come together:

A. Disc

B. Tendon

C. Ligament

D. arilage

Answer:



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67. Which of the following assists in the locomotion of the organism stated?

- A. Pedicellaria of starfish
- B. Epithelium of Pheretima
- C. Trichocysts of Paramecium
- D. Posterior sucker of Hirudinaria.

Answer:



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68. human cranium has bones:

A. 8

B. 14

C. 20

D. None of these

Answer:



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69. An acromian process is characteristically found in the :

- A. Pelvic girdle of mammals
- B. Skul of frog
- C. Pectoral girdle of mammals
- D. Sperm of mammals

Answer:



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70. Which one of the following pairs is not correctly matched?

- A. Cartilaginous joint-skull bones
- B. Hinge joint - between vertebrae
- C. Fibrous joint-between phalanges
- D. Gliding joint - between zygapophyses

Answer:



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71. Lumbar vertebrae in human skeleton are:

A. sacrum

B. Synsacrum

C. Coccyx

D. None of these

Answer:



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72. Knee joint is:

- A. Synovial joint
- B. Cartilaginous joint
- C. Hyaline joint
- D. Fibrous joint

Answer:



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73. If a muscle undergoes rapid contraction and relaxation ,the sarcoplasmic reticulum extension:

- A. Required constant plugging in and out of calcium
- B. Rapid synthesis of myosin
- C. Do not require energy
- D. All of these

Answer:

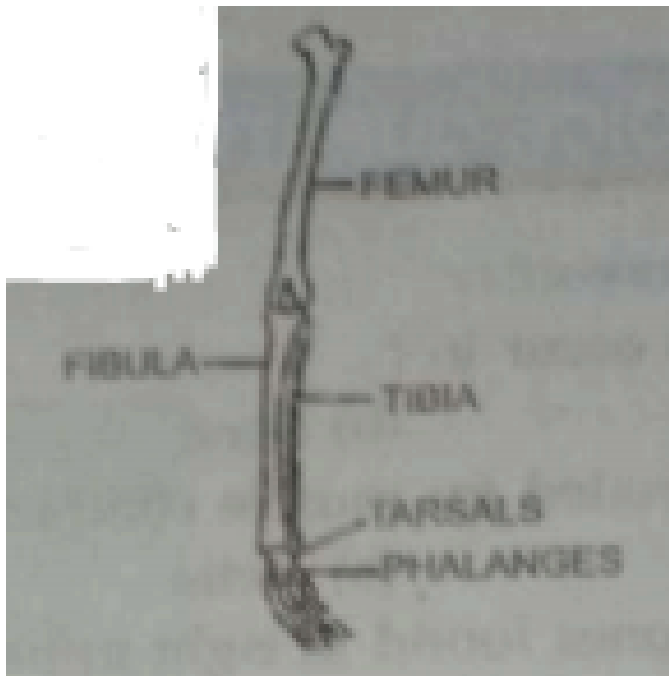




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74. Given diagram sHown bone off left human hindlimb as seen from front.It has certain mistakes in labelling Two of the wrongly

labelled bones are:



- A. Tivia and tarsals
- B. Ferur and fibula
- C. Fibula and phlanges

D. Tarsals and femur.

Answer:



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75. Exoskeleton is absent in:

A. Scoliodon

B. Frog

C. Rabbit

D. Fowl

Answer:



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76. Uricotelism is found in :

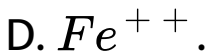
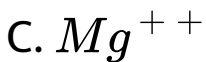
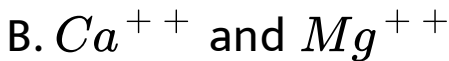
- A. Muscles of arm
- B. Vertebrae
- C. Muscles of leg
- D. Pubic symphysis

Answer:



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77. Which of the following is important for contraction and nerve impulse transmission?



Answer:



78. During strenuous exercise ,glucose is converted into:

- A. Strach
- B. Glycogen
- C. Pyruvije acid
- D. Lactic acid

Answer:



79. What is the cause of muscle fatigue? How is it removed?

A. Na^+

B. K^+

C. Lactic acid

D. Citric acid

Answer:



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80. Lumbar vertebrae in human skeleton are:

A. 5

B. 7

C. 9

D. 12

Answer:



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81. Describe Lactic acid fermentation.

A. Spasm

B. Convulsion

C. Muscle fatigue

D. Tetany

Answer:



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82. In frog's heart, there are cardiac muscles which consist of fibres called:

A. Flexor

B. Twitch

C. Extensor

D. Involution

Answer:



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83. Name the quantity which remains unchanged during the flight of an oblique projectile.

A. I

B. H

C. A

D. A-line

Answer:



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84. The contractile protein of skeletal muscle involving ATPase activity is:

A. Tropomyosin

B. Myosin

C. α Actinin

D. Troponin

Answer:



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85. A cricket player is fast chasing a ball in the field. Which one of the following group 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

Answer:



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86. Largest muscle in the human body is:

A. Sartorius

B. Gluteus

C. Stapedius

D. Masseter

Answer:



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87. Articulation of femur with pelvic girdle is an example of:

- A. Gliding joint
- B. Ball and socket joint
- C. Hinge joint
- D. Pivot joint

Answer:



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88. Lower jaw of man is formed of :

A. One bone

B. Two bones

C. No bone, only muscles

D. Three bones

Answer:



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89. What is structural and functional unit of a muscle fibre?

A. Fasciculi

B. Muscle fibre

C. Bundle

D. Both (a) and (c)

Answer:



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90. The number of vertebrae present in cervical, thoracic, lumbar, sacral and coccyx regions respectively are:

A. 12,7,5,1,1

B. 1,7,5,12,1

C. 7,5,1,12,1

D. 7,12,5,1,1

Answer:



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91. 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 pair

Answer:



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92. Which one of the following is a skull bone?

A. Coracoid

B. Arytenoid

C. Atlas

D. Pterygoid

Answer:



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93. ATPase enzyme needed for muscle contraction is located in:

A. Actinin

B. Troponin

C. Myosin

D. Actin

Answer:



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94. The first digit of forearm is called:

A. Pollex

B. hallux

C. Index

D. None of these

Answer:



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95. Spongy or cancellous bones are:

Skull bones

Vertebrae

Femur

Ribs:

A. 1,2 and 3 are correct

B. 1 and 2 are correct

C. 2 and 4 are correct

D. 1 and 3 are correct

Answer:



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96. Glenoid cavity is found in :

- A. Pelvic girdle
- B. pectoral girdle
- C. Sternum
- D. Humerus

Answer:



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97. Bones become fragile in:

A. Osteoporosis

B. Gout

C. Arthritis

D. None of these

Answer:



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98. An acromian process is characteristically found in the :

- A. Pelvic girdle of mammals
- B. Skul of frog
- C. Pectoral girdle of mammals
- D. Sperm of mammals

Answer:



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99. Which one of the following pairs is not correctly matched?

- A. Cartilaginous joint-skull bones
- B. Hinge joint - between vertebrae
- C. Fibrous joint-between phalanges
- D. Gliding joint - between zygapophyses

Answer:



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100. Synsacrum of fowl is consist of about,

- A. 29 vertebrae
- B. 3 vertebrae
- C. 16 vertebrae
- D. Single vertebra

Answer:



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101. A sesamoid bone is:

A. Palatine

B. Pterygoid

C. Patella

D. Presphenoid

Answer:



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102. Globular protein molecule which masks the active sites on F-actin is:

A. Troponin

B. Tropomyosin

C. Myosin

D. Light meromyosin

Answer:



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103. Find out the correct order of number of bones in the parts of skull such as cranial bone, facial bone, hyoid bone and middle ear bone respectively:

A. 14,8,1 and 3

B. 3,8,14 and 1

C. 8,3,14 and 1

D. 8,14,1 and 3

Answer:



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104. Acoelous vertebra of frog is :

A. 5th vertebra

B. Atlas vertebra

C. 8th vertebra

D. None of these

Answer:



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105. Number of bones in human skull is:

A. 26

B. 28

C. 107

D. 29

Answer:



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106. Hinge joint is present between f:

- A. Femur and ulna
- B. Humerus and ulna
- C. Femur and petoral girdle
- D. Femur and pelvic girdle

Answer:



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107. Select a sesamoid bone:

A. Patella

B. Femur

C. Ulna

D. Pterygoid

Answer:



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108. Accumulation of which of following in muscle causes fatigue ?

- A. Acetic acid
- B. Carboxylic acid
- C. hydrochloric acid
- D. Lactic acid

Answer:



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109. What connects muscle to bone?

A. Ligament

B. Cartilage

C. Tendon

D. Sarcomere

Answer:



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110. Basic unit of vertebrate kidney is:

A. Cell

B. Nephron

C. neuron

D. Ommatidium

Answer:



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111. Which one of the following items Gives its correct total number?

A. types of diabetes-3

B. Cervical vertebrae in humans-8

C. Floating ribs in humans-4

D. Amino acids found in proteins-16

Answer:



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112. During strenuous exercise ,glucose is converted into:

A. Glycogen

B. Pyruvic acid

C. Strach

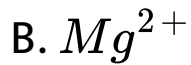
D. Lactic acid

Answer:

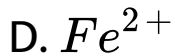


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113. Which of the following is important for muscle contraction?



C. Both (a) and (b)



Answer:



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114. Number of bones in human skull is:

A. 26

B. 28

C. 107

D. 29

Answer:



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115. Globular protein molecule which masks the active sites on F-actin is:

A. G-actin

B. Actin

C. Tropomyosin

D. Troponin

Answer:



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116. Number of cervical vertebrae in mammals

are:

A. 7

B. 8

C. 12

D. 6

Answer:



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117. The joint between atlas and axis is :

A. Ball and Socket joint

B. Pivot joint

C. Saddle joint

D. Angular joint

Answer:



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118. Elbow joint is an example of :

A. Pivot joint

B. Hinge joint.

C. Gliding joint

D. Ball and socket joint

Answer:



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119. Which one of the following is correct?



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120. Pick out the correct match:

A. Sternum==14 bones

B. Pelvis=3 bones

C. Ribs=20 bones

D. Face=5 bones

Answer:



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121. Which cartilage is present at the joints of long bones?

A. Calcified

B. Elastic

C. Hyaline

D. Fibrous

Answer:



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122. Innominate is:

A. A nerve

B. A vein

C. An artery

D. A part of skeleton and an artery

Answer:



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123. Thoracic cage in rabbit is made up of:

A. Ribs,vertebral column and diaphragm

B. Ribs,diaphragm and sternum

C. Vertebral column, diaphragm and sternum

D. Ribs, vertebral column and sternum

Answer:



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124. Acoelous vertebra of frog is :

A. Procoelous

B. Aceolous

C. Amphicoelous

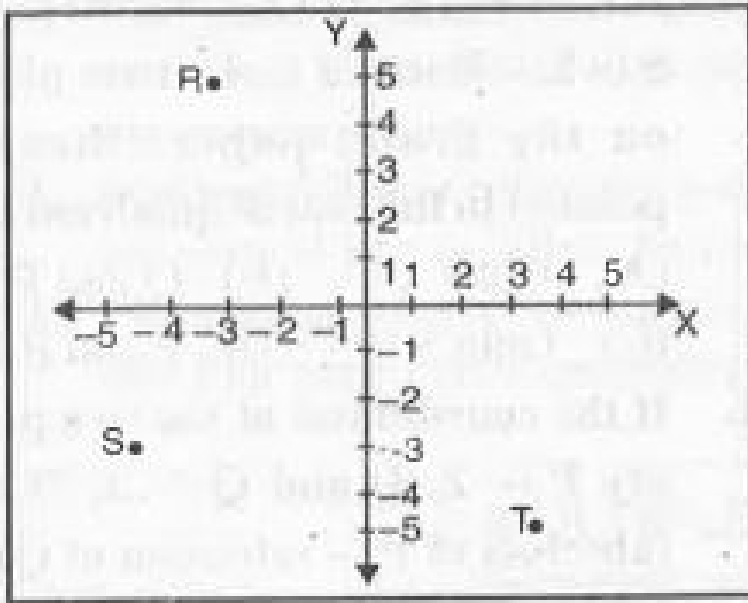
D. Amphiplatyan

Answer:



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125. In fig., the point identified by the coordinates $(-5, -3)$ is :



- A. Sigmoid notch
- B. Deltoid ridge
- C. Odontoid process
- D. Centrum

Answer:



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126. Which one of the following is correct?

- A. Parietal bone and temporal bone of the skull are joined by fibrous joint
- B. First vertebra is axis which articulates with the occipital condyles
- C. The 9th and 10th pairs of ribs are called floating ribs

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

Answer:



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127. Pectoral girdle constitute:

A. Scapula and clavicle

B. Radius and ulna

C. Ilium and ischium

D. Maxilla and mandible

Answer:



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128. End plate junction is present between:

A. neuron and striated muscle

B. Neuron and neuron

C. Muscle and muscle

D. Both (b) and (c)

Answer:



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129. Acetabulum is present in :

- A. Pelvic girdle of rabbit
- B. Pectoral girdle of rabbit
- C. Both (a) and (b)
- D. None of these

Answer:



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130. Opening in the skull of rabbit is :

- A. Foramen of Monro
- B. Coronal suture
- C. Foramen magnum
- D. Lambdoidal suture

Answer:



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131. The membranous areas between the cranial bones of foetal skull are called:

A. Areolas

B. Foramina

C. Sutures

D. Fontanelle

Answer:



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132. Give one example of pivotal joint?

A. Hip joints

B. Metacarpophalangeal joints

C. Ankle joint

D. Radio ulnar joint

Answer:



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133. Give the function of intervertebral discs.

A. Absorb shock

B. String the vertebrae together

C. Prevent injuries

D. Prevent hyper extension

Answer:



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134. Explain briefly the various types of plant movements

A. Rib no.1-2

B. Rib no.3-5

C. Rib no.6-10

D. Rib no.11-12

Answer:



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135. In the resting muscle fibre ,tropomyosin partially covers:

- A. Ca-binding sites of troponin
- B. Actin-binding sites off myosin
- C. Myosin-binding sites of actin
- D. Ca-binding sites on actin

Answer:



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136. in human beings, the cranium is formed by:

- A. Eight bones of which two are paired
- B. Fourteen bones of which six are paired
- C. Ten bones of which two are paired
- D. Twelve bones of which four are paired

Answer:



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137. Actin - binding sites are located on:

A. Troponin

B. Tropomyosin

C. Meromyosin

D. Both tropomyosin and meromyosin

Answer:



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138. Scapula is a large triangular flat bone situated in the dorsal part of the thorax between:

- A. The second and fifth ribs
- B. The second and seventh ribs
- C. The third and sixth ribs
- D. The third and eighth ribs

Answer:



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139. The coxal of the pelvic girdle is formed by the fusion of :

A. Ilium, ischium and pubis

B. Scapula and clavicle

C. ilium and scapula

D. ilium , scapula and ischium

Answer:



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140. Fill in the blanks

minimum strength of stimulus required to initiate muscle contraction is..... .



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141. What is structural and functional unit of a muscle fibre?



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142. Fill in the blanks

the skull bones are joined by tissue while the bodies of vertebrae are joined by tissue.



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143. Fill in the blanks

Dark bands of muscle fibres are made of protein while light bands of muscle fibres are made of proteins.





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144. Fill in the blanks

Bio-chemical changes in muscle contraction were explained by.....



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145. On which bone, deltoid ridge is present?



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146. Fill in the blank

Pelvic girdle is formed by fusion of three bones- ilium, ischium and



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147. Fill in the blanks

Depressed activity of osteoblasts lead to disease called..... ./



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148. Fill in the blanks

..... is cup-like depression in pelvic girdle.



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149. Fill in the blanks

..... bones are present in wrist of hand
while..... bones are present in ankle of foot.



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150. Fill in the blanks

..... muscle fibres are involved in rapid contraction for short duration while muscle fibres are involved in slow contraction for long period.



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151. Fill in the blanks

Joint of femur with pelvic girdle is joint.



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152. Give one example of hinge joint?



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153. Fill in the blanks

Humerus ,radius and bones are found in the forearm.



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154. Fill in the blanks

Acetabulum is present in the girdle.



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155. State True or False Sarcomere is covering
of striated muscle fibre.



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156. Write true or false:

Red muscles are slow acting while white muscles are fast acting.



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157. Write true or false:

Glenoid cavity is present in pelvic girdle while acetabulum is present in pectoral girdle.



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158. Write true or false:

Bone forming cells are called osteoclasts while bone dissolving cells are called osteoblasts.



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159. True and False:

In the vertebrates, the ATP is regenerated by phosphagens like phosphocreatine and phospharginine.



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160. True and False:

Bones of wrist are tarsals while bone of ankle are carpals.



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161. True and False:

Man has dicondylic skull



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162. True and False:

Astragalus and calcaneum bones are found in fore limb of frog.



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163. Write true or false:

obturator forament is found in pelvic girdle.



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164. Write true or false:

Stapes is smallest bone of human skeleton while Tibia is longest bone of human skeleton.



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165. Mark the odd one in each series:

Ilium, ileum, ischium, pubis.



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166. Mark the odd one in each series:

Sarcomere,actin

filaments,myosin

filaments,sarcoplasmic reticulum.



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167. Mark the odd one in each series:

Clavicle,scapula,glenoid

cavity,innominate

bone.



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168. Mark the odd one in each series:

Osteoblasts,periosteum,Haversian

canals,chondrin.



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169. Mark the odd one



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170. Mark the odd one in each series:

Symphysis, knee joint, ankle joint, elbow joint.



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171. Mark the odd one



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172. Mark the odd one



Watch Video Solution

173. Mark the odd one



Watch Video Solution

174. Mark the odd one in each series:

Sarcolemma, neurilemma, sarcomere, sarcoplasm.



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175. State the relationship between first two words and suggest a suitable word for the fourth place:

Forelimb:Humerus::Hindlimb:..... .



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176. State the relationship between first two words and suggest a suitable word for the fourth place:

Pelvic

girdle:Acetabulum::Pectoral

girdle:..... .



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177. State the relationship between first two words and suggest a suitable word for the fourth place:

Wrist:Carpals::Ankle:..... .



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fourth place:

Support of head : Atlas::Rotatory movements

of head:..... .



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180. Give the reason for the following statements:

Sutures are immovable joints.



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181. Give the reason for the following statements:

Atlas vertebra is also called yes bone.



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182. Give the reason for the following statements:

Pelvis of human female is shallower and broader than that of human male.



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183. Give the reason for the following statements:

Two pelvic girdles are joined by a pubic symphysis.



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184. Give the reason for the following statements:

Elbow joint is called hinge joint.



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185. Give the reason for the following statements:

Arthritis is a common disease of old age.



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186. Give the reason for the following statements:

After menopause, human female generally suffers from osteoporosis.



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187. Give the reason for the following statements:

White muscle fibres undergo early fatigue.



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188. These questions consist of two statements each, printed as Assertion and Reason. While answering these questions you are required to choose any one of the following

four responses.

If both Assertion and Reason are true and Reason is correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion: Human vertebrae are called amphiplatyan type.

Reason: Centrum of vertebrae is flat on both sides.

A. A

B. B

C. C

D. D

Answer:



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189. These questions consist of two statements each, printed as Assertion and Reason. While answering these questions you are required to choose any one of the following

four responses.

If both Assertion and Reason are true and Reason is correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Osteoarthritis is also called wear and tear disease.

Reason:In osteoarthritis,there is inflammation and degeneration of cartilages at the joints.

A. A

B. B

C. C

D. D

Answer:



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190. These questions consist of two statements each, printed as Assertion and Reason. While answering these questions you are required to choose any one of the following

four responses.

If both Assertion and Reason are true and Reason is correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion: Intervertebral discs are tough and strong than the pinna of man.

Reason: Intervertebral discs are formed of fibro cartilages while pinna is with calcified cartilage.

A. A

B. B

C. C

D. D

Answer:



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191. These questions consist of two statements each, printed as Assertion and Reason. While answering these questions you are required to

chose any one of the following four responses.

If both Assertion and Reason are true and Reason is correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion: Birds are with pneumatic bones.

Reason: Air sacs make the bones lighter which helps in the flight of the birds.

A. A

B. B

C. C

D. D

Answer:



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192. These questions consist of two statements each, printed as Assertion and Reason. While answering these questions you are required to choose any one of the following four responses.

If both Assertion and Reason are true and Reason is correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion: In muscle contraction, length of both A-bands and I-bands decrease.

Reason: Both myosin of A-bands and actin of I-bands are contractile proteins and decrease in size during muscle contraction.

A. A

B. B

C. C

D. D

Answer:



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193. These questions consist of two statements each, printed as Assertion and Reason. While answering these questions you are required to choose any one of the following

four responses.

If both Assertion and Reason are true and Reason is correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion: During exercise, a person undergoes fatigue very soon.

Reason: During this period, muscle fibres undergo oxygen debt.

A. A

B. B

C. C

D. D

Answer:



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194. These questions consist of two statements each, printed as Assertion and Reason. While answering these questions you are required to choose any one of the following

four responses.

If both Assertion and Reason are true and Reason is correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion:Pigeons and kites can fly for long period without undergoing fatigue.

Reason:These birds have white muscle fibres which undergo slow and sustained contraction for long period.

A. A

B. B

C. C

D. D

Answer:



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195. These questions consist of two statements each, printed as Assertion and Reason. While answering these questions you

are required to choose any one of the following four responses.

If both Assertion and Reason are true and Reason is correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion: Cartilage (protein matrix) and bone (calcium matrix) are rigid connective tissues.

Reason: Blood is connective tissue in which plasma is matrix.

A. A

B. B

C. C

D. D

Answer:



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196. These questions consist of two statements each, printed as Assertion and Reason. While answering these questions you

are required to choose any one of the following four responses.

If both Assertion and Reason are true and Reason is correct explanation of Assertion.

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion: Inflammation of skeletal joint may immobilize and movements of joints.

Reason: Uric acid crystals in the joint cavity and ossification of articular cartilages lead to this.

A. A

B. B

C. C

D. D

Answer:



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197. Name the protein present in A-band and I-band.



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198. Name the two types of myofilaments in a sarcomere.



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199. Fill in the blank

.....causes the depolarisation of the sarcolemma of muscle fibre.



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200. Give an example of slightly movable joint.



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201. Give the position of glenoid cavity.



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202. Give the smallest and longest bone of human skeleton.



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203. Give the location of foramen magnum and neural canal.



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204. What is craniostylic jaw suspension?



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205. Give the location of carpals and tarsals.



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206. Name three bones of a pelvic girdle of man.



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207. Give the vertebral formula of man.



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208. Where are deltoid ridge and odontoid process located?



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209. Which bones are associated with :
supporting of head,



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210. Which bones are associated with :
supporting of head,



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211. Give the number of true ,false nd floating
ribs in man.



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212. Name a sesamoid bone.Give its position.



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213. Name the kind of joint which permits movements in a single plane.



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214. What is fibrous joint?



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215. What is a pivot joint?



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216. What is muscle twitch?



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217. Name the pigment present in red muscle fibres.



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218. Name the type of filaments which constitute A- Band (Dark band) and I - band (Light band).



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219. State any two characteristics of muscle fatigue. How is it caused?



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220. How many bones are present in human cranium?



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221. Give one example of hinge joint?



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222. Name the cavity in the girdle into which the head of femur fits.





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223. Mention the role of ligaments in human body.



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224. What is total number of bones present in the left pectoral girdle and left arm respectively in a normal human?



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225. What is arthritis? What are the causes of arthritis? Define sprain.



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226. What is rheumatoid arthritis?



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227. What is osteoporosis



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228. How many vertebrate are present in the vertebral column of man?



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229. Differentiate fibrous joint and cartilaginous joint.



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230. Differentiate between true, false and floating ribs.



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231. Differentiate osteoarthritis and rheumatoid arthritis.



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232. What is arthritis? What are the causes of arthritis? Define sprain.



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233. What are synovial joints? Explain.



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234. What is a pivot joint?



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235. Why a red muscle fibre can work for a prolonged time while a white muscle fibre suffers from fatigue after a short work?



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236. List any four functions of skeletal system.



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237. What makes the synovial joint freely movable? List any four types of synovial joints.



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238. What is synovial joint? With the help of one example for each, point out the differences between a ball and socket joint, and a pivot joint.



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239. Contrast between the following :

Muscle twitch and tetanus.



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240. What is role of calcium in muscle contraction?



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241. What makes the synovial joint freely movable ?List any four types of synovial joints.



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242. What causes muscle fatigue ?How is it removed?



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243. Human has three kinds of ribs. Name these with example.



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244. Give two differences between rheumatoid arthritis and gouty arthritis.



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245. What is osteoporosis?



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246. Write the difference between: Red and White muscles



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247. What is joint? Discuss its types with examples.



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248. Distinguish between:

Ball and socket joint and hinge joint.



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249. Differentiate between fixed joint and synovial joint.



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250. Give a list of bones and their number in the human body.



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251. Give the biological importance of:

Myosin and actin filaments



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252. Give the biological importance of:

Myoglobin



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253. Write the biological importance of the

following:

Synovial joints



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254. Write the biological importance of the following:

Fibrous joints



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255. Give the biological importance of:

Lactic acid.



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256. How are thick and thin filaments arranged in a muscle fibre?



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257. Elucidate the types of movements found among the animals.



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258. How does the muscle shorten during its contraction and lengthen during its relaxation?



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259. What is synovial joint? With the help of one example for each, point out the differences between a ball and socket joint, and a pivot joint.



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260. Give the summary of the chemical events involved in the process of muscle contraction



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261. Why are movements and locomotion necessary among the animals?



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262. Explain the sliding filament theory of muscle contraction.



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263. Explain the initiation of muscle contraction. What is the role of sarcoplasmic reticulum, myosin head and F-actin during contraction of striated muscles?



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264. Name the category of bones forming the rib cage. How are these articulated to each other to form the cage?



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265. What is the role of calcium ions, troponin and F-Actin during contraction of striated muscles of humans?



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266. Explain giving one example of each, the three types of joints in human skeleton, based on the capacity of movement.



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267. Write short notes on synovial joints.



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268. What is the cause of muscle fatigue? How is it removed?



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269. Explain biochemical changes during muscle contraction.



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270. Describe various kinds of skeletal joints in the body according to their mobility giving one example of each.



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271. Write five basic functions of human skeleton.



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272. How do you account for 206 bones in the human skeleton?



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273. What is the mechanism of muscular contraction?



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274. Differentiate between ball & socket and hinge joint.



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275. Describe different types of joints .Give examples.



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276. What is the mechanism of muscular contraction?



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Example

1. Draw the diagram of a sarcomer of skeletal muscle showing different regions.



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2. Define sliding filament theory of muscle contraction.



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3. Describe the important steps in muscle contraction.



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4. Write true or false. If false change the statement so that it is true: Actin is present in thin filament



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5. Write true or false. If false change the statement so that it is true: H-zone of striated muscle fiber represents both thick and thin filaments.



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6. Write true or false. If false change the statement so that it is true: Human skeleton has 206 bones.



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7. True or False

There are 11 pairs of ribs in man.



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8. Write true or false. If false change the statement so that it is true: Sternum is present on the ventral side of the body.



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9. Write the difference between: Actin and Myosin



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10. Write the difference between: Red and White muscles



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11. Write the difference between: Pectoral and Pelvic girdle



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12. Match column-I with column-II.

Column I	Column II
(a) Smooth muscle	(i) Myoglobin
(b) Tropomyosin	(ii) Third-class lever
(c) Red muscle	(iii) Thin filament
(d) Skull	(iv) Sutures
	(v) Involuntary



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13. What are the different types of movements exhibited by the cells of human body?



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14. How do you distinguish between a skeletal muscle and a cardiac muscle?



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15. Name the type of joint between the following: atlas/axis



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16. Name the type of joint between the following: carpal/metacarpal of thumb



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17. Name the type of joint between the following: between phalanges



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18. Name the type of joint between the following: femur/acetabulum



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19. Name the type of joint between the following: between cranial bones



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20. Name the type of joint between the following: between public bones in the pelvic girdle



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21. Fill in the blank spaces: All mammals (except a few) have _____ cervical vertebra.



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22. Fill in the blank spaces: The number of phalanges in each limb of human is _____



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23. Fill in the blank spaces: Thin filament of myofibril contains 2 F actins and two other proteins namely _____ and _____.



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24. Fill in the blank spaces: In a muscle fiber

Ca^{++} is stored in _____



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25. Fill in the blank spaces: _____ and

_____ pairs of ribs are called floating ribs.



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26. Fill in the blank

The human cranium is made ofbones.



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