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## BIOLOGY

# BOOKS - CENGAGE BIOLOGY (HINGLISH) 

## LOCOMOTION AND MOVEMENT

## Exercises

1. Cyclosis is a characteristic of plant cells such as Amoeba and vertebrate WBCs. This movement is due to
A. Sliding microtubule
B. Cytoplasmic streaming
C. Beating of cilia
D. Podia formation
2. Sheet or broad band of fibrous connective tissue that is
deep to the skin and surrounds muscles and other organs of body are
A. Epimysium
B. Pasicule
C. Endomysium
D. Fascia

## Answer: D

## - Watch Video Solution

3. The contractile unit of muscle is a part of myofibril be- tween
A. $Z$ line and $I$ band
B. $Z$ line and $Z$ line
C. $Z$ line and $A$ band
D. A band and I band

## Answer: B

## - Watch Video Solution

4. The number of thick myofilaments (myosin) surrounding

Single thin myofilament (actin) are
A. 3
B. 6
C. 2
D. 4

## Answer: A

5. At rest, when mucsle is relaed, thin filaments interdigitate with thick filaments only
A. Outside A band
B. Outside H band
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. $\mathrm{Ca}^{2+}$
B. $\mathrm{Na}^{+}$
C. $K^{+}$
D. $M g^{2+}$

## Answer: A

## - Watch Video Solution

7. In which category of muscle fibers, contraction can be regulated by acetylcholine neurotransmitter ?
A. Skeletal muscle fibers
B. Cardiac muscle fibers
C. Smooth muscle fibers
D. all of these

## Answer: D

## - Watch Video Solution

8. According to sliding filament theory of muscle contraction, the filament that move to shorten a muscle are
A. Myosin
B. Actin
C. Collagen
D. Creatine phosphate

## Answer: B

## - Watch Video Solution

9. Anaerobic work becomes painful due to the accumulation of
A. $C a^{2+}$ ions
B. Myosin
C. Lactic acid
D. Creatine phosphate

## Answer: C

## - Watch Video Solution

10. The lactic acid generated during muscle contraction us flnally converted to glycogen in
A. Muscle
B. Kidney
C. Liver
D. Pancreas

## Answer: C

## - Watch Video Solution

11. The contraction of muscle of shortest duration is seen in
A. Jaws
B. Eyelids
C. Heart
D. Intestine

## Answer: B

## D Watch Video Solution

12. The time period between the beginning of electrical response and the peak of tension recorded is called
A. Contraction time
B. Latent Period
C. Refractory
D. Relaxation time

## Answer: A

13. Muscle fatigue occurs due to the accumlation of
A. $\mathrm{CO}_{2}$
B. Lactic acid
C. Creatine phosphate
D. Myosin ATPase

Answer: B

## - Watch Video Solution

14. In a contracted skeletal muscle fiber,
A. M line disappears
B. H zone elongates
C. I band remains constant
D. A band disappears

## Answer: A

## - Watch Video Solution

15. Which one of the following ions is essential for muscelar contration ?
A. $\mathrm{Na}^{+}, \mathrm{Ca} a^{++}$
B. $\mathrm{Mg}^{++}, \mathrm{Ca}^{++}$
C. $\mathrm{Mg}^{++}, \mathrm{K}^{+}$
D. $K^{+}, N a^{+}$

## Answer: B

## - Watch Video Solution

16. The potential difference across the membrane of a relaxed muscle fiber is called resting potential. It amounts to about
A. -70 mV
B. 50 mV
C. 100 mV
D. $50-100 \mathrm{mV}$

## Answer: A

## - Watch Video Solution

17. The longest individual muscel in the humen body is
A. Quadriceps femoris
B. Gluteus maximus
C. Sertorius
D. Latissmus dorsi

## Answer: C

## D Watch Video Solution

18. In which one of the following functions, white muscles are not used ?
A. Moving of eye balls
B. Fast and strenous 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

19. cori cycle involves
A. Liver
B. Muscles
C. Liver and muscles both
D. None the these

## Answer: C

## - Watch Video Solution

20. Which one of the following is a viral disease that weakens the muscles
A. Atrophy
B. Poliomuyelitis
C. Dystrophy
D. Muscular hypertrophy

## Answer: B

21. To one of the lateral surface of humerus, a muscle is ateached called
A. Biceps brachii
B. Deltoidius
C. Sertorius
D. Messeter

## Answer: B

22. In birds, which flight muscle is well-developed ?
A. Atary
B. Biceps
C. Gastrocnemius
D. Pectoralis major

## - Watch Video Solution

23. The backward bending of the shank is worked out by
A. Gluteus maximus
B. Quadriceps femoris muscles
C. Adductor group of muscles
D. Gastrocnmus and hamstrings

## Answer: D

## - Watch Video Solution

24. The longes visceral muscles are found in
A. Vas deferens
B. Normal uterus
C. Pregnant utrerus
D. Abdomen

## Answer: D

## D Watch Video Solution

25. Which one is not the character of red skeletal muscles ?
A. Smaller diameter
B. More mitochondria
C. More sarcoplasmic reticulum
D. More blood capillaries

## Answer: C

26. Which of the following is an example of multiunit smooth muscles ?
A. Smooth muscle with blood vessels
B. Smooth muscle with intestine
C. Masseter muscles of the jaw
D. Arrector pili muscle of skin

## Answer: D

## - Watch Video Solution

27. Only moveble bone in skull is
A. Mandible
B. Vomer
C. Maxilla
D. Palatine

## D Watch Video Solution

28. The part of skull that includes the cranium, olfactory capsules, and optic capsulers is known as
A. Splanchnocranium
B. Dermocranium
C. Neurocranium
D. Cranium

## Answer: C

## D Watch Video Solution

29. Only moveble bone in skull is
A. Mandible
B. Vomer
C. Maxilla
D. Palatine

## Answer: A

## - Watch Video Solution

30. Which one of the followoing is the bone enclosing the tympanum is mammals ?
A. Tympanic membrane
B. Tympanic membrane
C. Masloid
D. Periodic and tympanic bulla

## Answer: B

31. 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

32. The number of upaired bones in the cranium is
A. 2
B. 4
C. 6
D. 1

## Answer: B

## - Watch Video Solution

33. Foramen magnum is associated with which bone ?
A. Frontal
B. Perietal
C. Temporal
D. Occipital

## Answer: D

## - Watch Video Solution

34. Tongue bone is
A. Mandible
B. Hyoid
C. Flat bone
D. Coccyx

## Answer: B

## D Watch Video Solution

35. Odontoid process is present with which vertebrae of vertabral column ?
A. Atlas vertebrae
B. Axis vertebrae
C. Vertebra prominens
D. Lumber vertebrae
36. The number of anterior curves present with humen vertebral column is
A. 2
B. 4
C. 6
D. 1

## Answer: A

## D Watch Video Solution

37. The total number of movable vertabrae in our body are
A. 26
B. 24
C. 31
D. 30

## Answer: B

## - Watch Video Solution

38. Vertabra prominens is present with
A. First thoracic vetabrae
B. First lumber vertebrae
C. Seventh cervical vertebrae
D. First cervical vertabrae

## Answer: C

## - Watch Video Solution

39. Cervical vertebrae can be distinguished from other vertebrea on the basis of
A. Odontoid processes
B. Transverse processes
C. Amphiplatyan centrum
D. Vertebra-arterial canals

## Answer: D

## - Watch Video Solution

40. The heaviest and largest vertebrae are
A. Thoracic
B. Lumber
C. Cervical
D. Sacral

## Answer: B

## D Watch Video Solution

41. Typical thoracic vertabrane are
A. 12
B. 1,9,10,11,12.
C. $1,2,7$
D. 1 to 8

## Answer: D

Watch Video Solution
42. In birds, vertebrae in the neck region are
A. Amphiplatyan
B. Heterocoelous
C. Opisthocoelous
D. Amphicoelous

## Answer: B

## - Watch Video Solution

43. The centrum of a vertebra which is concave on both sider is called as
A. Amphicoelous
B. Opisthocoelous
C. Acoelous
D. Procoelaus

## Answer: A

44. The type of vertabrae in the case of humen is
A. Amphiplatyan
B. Procoelous
C. Amphicoelous
D. Heterocoelous

## Answer: A

## - Watch Video Solution

45. How many vertebra-chondral ribs are present in the humen ?
A. 7 pairs
B. 2 pairs
C. 3 pairs
D. 12 pairs

## Answer: C

## D Watch Video Solution

46. The number of floating ribs is
A. 2 pairs
B. 12 pairs
C. 7 pairs
D. 3 pairs

## Answer: A

47. Glenoid ridge is found in which one of the following bones?
A. Pelvic girdle
B. Coracoid
C. Clavicle
D. Scapula

## Answer: D

## - Watch Video Solution

48. Deltoid ridge is found in which one of the following bones
A. Radius
B. Tibia
C. Femar
D. Humerus

## Answer: D

49. Olecranon fossa is present over
A. Radius
B. Ulna
C. Humerus
D. Femur

## Answer: C

## - Watch Video Solution

50. The sigmoid notch is present in
A. Femur
B. Tibio-fibula
C. Humerus
D. Radio-ulna

## D Watch Video Solution

51. Mark the odd one out.
A. Scaphoid
B. Lunate
C. Pisiform
D. Calcaneum

## Answer: D

Watch Video Solution
52. Phalangeal formula for the hand is
B. 33333
C. 33322
D. 32333

## Answer: A

## - Watch Video Solution

53. When we move the palm in upward direction by the action of supinator muscle, the position of ulna is

## - Watch Video Solution

54. Which one of the following is called hip bone ?
A. Innominate
B. Scapula
C. Manbrium
D. Coracoid

## Answer: A

## - Watch Video Solution

55. Obturator formen is enclosed between
A. Ilium, ischium, and pubis
B. Ischium and pubis
C. Ilibum and ischium
D. Ilium and pubis

## Answer: B

## D Watch Video Solution

56. Which of the following are involved in the formation of acetabulum ?
A. (a) and (b) only
B. (b) and (c) only
C. (a) and (c) only
D. (a), (b) and (c)

## Answer: D

## - Watch Video Solution

57. Saddle joint is present between
A. Radius and ulna
B. Carpals
C. Carpal and metacarpal of thumb
D. Ulna and humerus

## Answer: C

58. Hinge joint is present between
A. Humerus and radio-ulna
B. Femur and pelvic gitdle
C. Femer and acetabulum
D. Humerus and pectoral girdle

## Answer: A

## - Watch Video Solution

59. Which of the following movements in mammalian skeleton represent the leverage of the third order Itbgt (force applied at a point between fulcrum and the point of resistance) ?
A. Biceps muscle flexing arm at elbow
B. Triceps muscle extending arm at elbow
C. Gastrocnemius muscle raising the weight of body on toes
D. Movement of the heac of femur in the acetabulum of pelvic girdle

## Answer: A

## - Watch Video Solution

60. Which of the following abnoromalities will include the secretion of abnormal granules-pannus ?
A. Osteoarthritis
B. Rheumatoid arthritis
C. Gout
D. Osteoporosis

## Answer: B

61. The cells rasonsible for the resorption of bone matrix
during the growth and remodeling of the skeleton are called
A. Osteoblasts
B. Ostecclasts
C. Chondroblasts
D. Chondroclasts

## Answer: B

## - Watch Video Solution

62. Find the odd one out.
A. Humerus, thigh, tibia and fibula, radius and ulna
B. Metacarpals and metatarsals, phalanges of fingers and toes
C. Scapula of shoulder bone, sternum, cranial bones, vetebrae
D. Carpals of wrist and tarsals of ankle

## Answer: C

## - Watch Video Solution

63. Find the odd one out .
A. Ilium, ischium, and pubis
B. Deltoid ridge, olecranon process, trochanter
C. Suprascapula, coracoid, scapula, trochlea
D. Epiphysis, xiphisternum, olecranon notch

## Answer: A

## - Watch Video Solution

64. 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

65. Bone formed by ossification of tendon is
A. Sesamoid
B. Cartilage or repliacing bone
C. Investing or dermal bone
D. Membranous bone

## Answer: A

66. "All or none" rule cannot be implicated on
A. Non-striated muscles
B. Cardiac muscle
C. Striated muscles
D. All the above

## Answer: D

## - Watch Video Solution

67. Each myofibril has a diameter of
A. $1-2 m m$
B. $0.1-0.2 \mathrm{~mm}$
C. $0.001-0.002 \mathrm{~mm}$
D. None of the above

## Answer: C

## - Watch Video Solution

68. Myosin filaments are localized in
A. Z band
B. H band
C. A band
D. None of the above

## Answer: C

## - Watch Video Solution

69. Chemical ions responsible for muscle contraction are
A. $\mathrm{Ca}^{++}$and $K^{+}$
B. $N a^{+}$and $K^{+}$
C. $\mathrm{Na}^{+}$and $\mathrm{Ca}^{++}$
D. $\mathrm{Ca}^{++}$and $\mathrm{Mg}^{++}$ions

## Answer: D

## - Watch Video Solution

70. Muscles get fatigued due to accumulation of
A. Adenosine triphosphate
B. $\mathrm{CO}_{2}$
C. Lactic acid
D. Phosphate molecules

## Answer: C

71. Basic unit of muscle contraction is
A. Actin
B. Myosin
C. Sarcomere
D. Tropomyosin

## Answer: C

## D Watch Video Solution

72. Muscle fibres having rounded ends are
A. Unstriped muscles
B. Smoothe muscles
C. Striated muscles
D. All the above

## Answer: A

## - Watch Video Solution

73. Transmitter substance released at the synapse is
A. Secretin
B. Cholecystokinin
C. Cholesterol
D. Acetylcholin

## Answer: D

## - Watch Video Solution

74. Which is part of pectoral girdle ?
A. Ileum
B. Glenoid cavity
C. Acetabulum
D. Sternum

## Answer: B

## - Watch Video Solution

75. Cervical vertebra is differentiated from other vertebra by
A. presence of odontoid
B. presence of transverse process
C. Amphiplatyan centrum
D. presence of vertebrarterial canal

## Answer: D

76. Exoskeleton of rabbit have : -
A. Hair
B. Hair and hoof
C. Hair and claws
D. Hair, claws, and hoof

## Answer: C

## - Watch Video Solution

77. Humerus is different from femur due to the presence of
A. Spines
B. Deltoid ridge
C. Glenoid cavity
D. Vertebra column

## Answer: B

## - Watch Video Solution

78. Scapula is a part of
A. Skull
B. Pelvic girdle
C. pectoral girdle
D. Vertebral column

## Answer: C

## - Watch Video Solution

79. Obturator foramen present between : -
A. llium and ischium
B. Ischium and pubis
C. Ilium and pubis
D. None

## Answer: B

## - Watch Video Solution

80. Long neck of Girraffe or camel due to : -
A. More number of cervical vertebra
B. More length of carvical vertabra
C. Presence of muscular pads between carvical vertebrae
D. Presence of extra bony plates

## Answer: B

81. The stoongest bone is
A. Tibia
B. Femur
C. Humerus
D. ulna

## Answer: B

## - Watch Video Solution

82. The number of tarsal bones in the ankle of rabbit is
A. 2
B. 7
C. 6

## D. 5

## Answer: C

## - Watch Video Solution

83. The heel bone or rabbit is
A. Central
B. Mesocuneiform
C. Ectocuneiform
D. Calcaneal process

## Answer: D

## - Watch Video Solution

84. The sesamoid bone of knee is
A. Patella and three fabellae
B. Patella and two fabellae
C. Fabellae
D. Pisiform

## Answer: B

## D Watch Video Solution

85. The number of bones present in the 1 st , 2 nd , and 3 rd rows of trasals is
A. 2,2,1
B. 2,3,1
C. $2,1,3$
D. 1,2,3

## Answer: C

86. Sacro-iliac joint is : -
A. Mavable
B. Immovable
C. Imperfect
D. None

## Answer: B

## D Watch Video Solution

87. Which bone does not participate in the formation of acetabulum ?
A. Pubis
B. Ilium
C. Ischium
D. None

## Answer: A

## - Watch Video Solution

88. In rabbit, the bone present between the pubis and acetabeulum is
A. Cytyloid
B. Scapula
C. Astragalus
D. Cuboid

## Answer: A

## D Watch Video Solution

89. Supratrochlear fossa is present in the
A. Humerus of frog
B. Humerus of rabbit
C. Radius of rabbit
D. Radius of frog

## Answer: B

## D Watch Video Solution

90. Trochlea of which bone fits in the sigmoid notch of ulna?
A. Humerus
B. Radius
C. Femur
D. Scaphid

## Answer: A

91. Acromian process is present in
A. Pectoral girdle of frog
B. Pectoral girdle of rabbit
C. Pelvic girdle of rabbit
D. Pelvic girdle of frog

## Answer: B

## - Watch Video Solution

92. Shoulder joint present between : -
A. Glenoid cavity of pectoral girdle and head of humerus
B. Coracoid process of pectoral girdle and head of humerus
C. Both
D. None

## Answer: A

## - Watch Video Solution

93. A typical vertebra of rabbit is
A. Acoelous
B. Procoelous
C. Amphicoelous
D. Amphiplatyan

## Answer: D

## - Watch Video Solution

94. A feature of the vertebra of mammals is
A. Centrum is amphiplatyan
B. Epiphysis is present
C. Inter vertebral disc present between two bones
D. All the above

## Answer: D

## D Watch Video Solution

95. False rib in humen is
A. $8 t h, 9 t h, \quad$ and $10 t h$ rib
B. $7 t h, 8 t h$, and $9 t h$ rib
C. $9 t h, 10 t h$, and $11 t h$ rib
D. $6 t h, 7 t h$, and $8 t h$ rib

## Answer: A

96. Jaw suspension of mammals is
A. Craniostylic
B. Autostylic
C. Both
D. None

## Answer: A

## D Watch Video Solution

97. The number of bones in the axial skeleton of rabbit is
A. 132
B. 128
C. 80

## Answer: A

## - Watch Video Solution

98. Hinge joint is :
A. Elbow joint
B. Ankle joint
C. Interphalangeal joint
D. All

## Answer: D

## - Watch Video Solution

99. Pivot joint is
A. Atlanto-axial joint
B. Shoulder joint
C. Hip joint
D. None

## Answer: A

## D Watch Video Solution

100. The study of joints is known as
A. Osteology
B. Arthrology
C. Craniology
D. Kinesiology

## Answer: B

101. A vertebra having flat surface both in front and behind is
A. Acoelous
B. Procoelous
C. Amphicoelous
D. Amphiplatyon

## Answer: D

## - Watch Video Solution

102. Long bones function in
A. Support
B. Support, erythrocyte and leucocyte synthesis
C. Support and erythrocyte synthesis
D. Erythrocyte formation

## Answer: B

## - Watch Video Solution

103. Acromion process is part of
A. Vertebral column
B. Pelvic girdle
C. Femur
D. Pectoral girdle

## Answer: D

## - Watch Video Solution

104. Part of the body having a single pair of bones is
A. Pelvic girdle
B. External ear
C. Wrist
D. Lower jaw

## Answer: A

## - Watch Video Solution

105. Comparative study of skulls is
A. Craniology
B. Conchology
C. Malacology
D. Osteology

## Answer: A

106. Longest bone of frog is
A. Humerus
B. Tibia-fibula
C. Femur
D. Radio-ulna

## Answer: B

## - Watch Video Solution

107. Haversian system is diagnostic feature of
A. Avian bones
B. Reptilian bones
C. Mammalian bones
D. Bones of all animals

## Answer: C

## - Watch Video Solution

108. The lower jaw in mammals is made up of
A. Mexilla
B. Dentary
C. Mendible
D. Ethmoid

## Answer: C

## - Watch Video Solution

109. Muscles are connected to Bone by means of :-
A. Cartilage
B. Areolar tissue
C. Tendon
D. Ligament

## Answer: C

## D Watch Video Solution

110. Which one has the maximum glycogen?
A. Liver
B. Muscles
C. Nerves
D. Kidneys

## Answer: B

## 111. Ankle joint is

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

## Answer: C

## - Watch Video Solution

112. Epiphysial plate is involved in
A. Formation of bone
B. Elongation of bone
C. Thickness of bone
D. All the above

## Answer: B

## - Watch Video Solution

113. Inter-articular disc occurs in
A. Wall of heart
B. Wall of liver
C. Pubic symphysis
D. In between two vertebrae

## Answer: D

## - Watch Video Solution

114. The total number of bones in your right arm is
" " Or

Total number of bones in the hind limb of a man is
A. 21
B. 24
C. 30
D. 14

## Answer: C

## - Watch Video Solution

115. Biceps are attached with
A. Radius
B. Ulna
C. Femur
D. Humerus

## Answer: D

## - Watch Video Solution

116. Bones of pelvic girdle forms a cavity in which head of the femur is fitted are
A. Ilium only
B. Ilium and ischium
C. Ilium,ischium, and pubis
D. Ischium and pubis

## Answer: C

117. The lower jaw of rabbit articulates with
A. Jugal
B. Alisphenoid
C. Squamosal
D. Perietal

## Answer: C

## - View Text Solution

118. Which is not an odd digitate pentadactylous ?
A. Donkey
B. Camel
C. Zebra
D. Rhinoceros

## D Watch Video Solution

119. Joint between atlas and odontoid process of axis is
A. Pivot joint
B. Saddle joint
C. Angular joint
D. Hinge joint

## Answer: A

Watch Video Solution
120. Astragalus and calcaneum are present in
A. Fore limb
B. Hind limb
C. Scapula
D. Clavicle

## Answer: B

## - Watch Video Solution

121. Coracoid is component of
A. Fore limb
B. Skull
C. pectoral girdle
D. Pelvic girdle

## Answer: C

## 122. Olecranon process occurs in

A. Femur
B. Radius
C. Humerus
D. ulna

## Answer: D

## - Watch Video Solution

123. Two halves of pelvic girdle are joined together by
A. Pubic symphysis
B. Ischiac symphysis
C. Ischiopubic symphysis
D. By fusion

## - Watch Video Solution

124. Deltoid groove is present in
A. Radio-ulna
B. Femur
C. Tibio-fibula
D. Humerus

## Answer: D

## - Watch Video Solution

125. Sutural joints are found between
A. Thumb and metatarsal
B. Humerus and radio-ulna
C. Perital of skull
D. Glenoid cavity and pectoral girdle

## Answer: C

## D Watch Video Solution

126. Which one is a bone of skull?
A. Atlas
B. Femur
C. Tibia
D. Pterygoid

## Answer: D

127. Joint of sternum and ribs is
A. Cartilagionus
B. Fibrous joint
C. Angular joint
D. Hinge joint

## Answer: A

## - Watch Video Solution

128. Myoglobin is present in
A. White muscle fibers
B. Red muscle fibers
C. Involuntary muscles
D. All the above

## D Watch Video Solution

129. Immediate source of energy for muscle contraction is
A. Glucose
B. GTP
C. Creatine phosphate
D. ATP

## Answer: C

## - Watch Video Solution

130. Synovial fluid is present in
A. Spinal cavity
B. Cranial cavity
C. Freely moveble joints
D. Fixed joints

## Answer: C

## - Watch Video Solution

131. EDTA injected into muscles combines with $\mathrm{Ca}^{2+}$ and
A. Stops contraction
B. Causes contraction
C. Slows down contraction
D. None of the above

## Answer: A

132. Mentomeckelian is specially a characteristic bone of
A. Rane tigrina
B. Aquas
C. Bos indicus
D. Felis domestics

## Answer: A

## - View Text Solution

133. Haversian canals are found in the :
A. Bones of birds
B. Bones of mammals
C. Bones of frog
D. Cartilage

## Answer: B

## - Watch Video Solution

134. Largest ear ossicle is
A. Incus
B. Malleus
C. Stapes
D. Cochlea

## Answer: B

Watch Video Solution
135. Bone formed by ossification of tendon is
A. Membrane bone
B. Dermal bone
C. Sesamoid bone
D. Cartilage

## Answer: C

## - Watch Video Solution

136. Fabellae bones are associated with
A. Elbow joint
B. Knee joint
C. Neck joint
D. Angular joint

## Answer: B

137. The thoracic cage of man is formed of
A. Ribs and thoracic vertebrae
B. Ribs, sternum and thoracic vertebrae
C. Ribs and sternum s
D. Ribs, sternum and lumber vertebrae

## Answer: B

## - Watch Video Solution

138. Jaw suspension of mammals is
A. Amphistylic
B. Craniostylic
C. Autocliastylic
D. Hyostylic

## D Watch Video Solution

139. Joint between humerus and radio-ulna is
A. Saddle joint
B. Hinge joint
C. Fibrous joint
D. Ball and socket

## Answer: B

## D Watch Video Solution

140. Ear ossicle, incus is modified
A. Jugal
B. Articular
C. Quadrate
D. Hyomandibular

## Answer: C

## D Watch Video Solution

141. The parasphenoid bone in frog forms
A. Base of cranium
B. Floor of cranium
C. Dorsal side of cranium
D. Dorsolateral side of cranium

## Answer: B

142. Smallest bone in Rabbit and Man is
A. Femur
B. Carpals
C. Stepes
D. Nasal

## Answer: C

## - Watch Video Solution

143. Metabolic arthritis is commonly called as
A. Rheumatism
B. Gout
C. Tuberculosis
D. Cancer

## Answer: B

## - Watch Video Solution

144. Match Column I with Column II.
A. $a-i, b-i i i, c-i i, d-i v$
B. $a-i, b-i v, c-i i i, d-i i$
C. $a-i i i, b-i v, c-i i, d-i$
D. $a-i, b-i i, c-i i i, d-i v$

## Answer: C

## D View Text Solution

145. Which of the following statements about the striated muscles is ture

In the centre of each I-Band is an elastic fiber(Z-line ) which bisects it M-line is a fibrous memebrane in the middle of $A$ bonds

Thin filament are firmly attached to the M-line

A sarcomere comprises one full A - bonds
A. ii
B. iv
C. $i$ and $i i i$
D. $i$ and $i i$

## Answer: D

## D Watch Video Solution

146. ATP provides energy of muscle contraction by allowing for
A. Cross-bridge attachment of myosin to actin
B. Cross-bridge datachment of myosin from actin
C. An actin potential formation in the muscle cell
D. Release of $\mathrm{Ca}^{+}$from sarcoplasmic reticulum

## Answer: B

## - Watch Video Solution

147. Match Column I with column II.
Column I
. Column
(a) Cranium/Brainbox
(i) 29
(b) Skull (Cranial and facial bones)
(ii) 8
(c) Face
(iii) 14
(d) Hind limb
(iv) 12 pairs
(e) Ribs
(v) 30
A. $a-i, b-i i, c-i i i, d-v, e-i v$
B. $a-i, b-i i, c-i i i, d-i v, e-v$
C. $a-i i, b-i, c-i i i, d-v, e-i v$
D. $a-v, b-i v, c-i i i, d-i i, e-i$

## Answer: C

148. Pick up the correct match .
(a) False ribs
(i) $1^{s t}$ to $7^{t h}$ pair
(b) Ture ribs
(ii) $11^{\text {th }}$ and $12^{\text {th }}$ pair
(c) Floating rib (iii) $8^{\text {th }}$ to $10^{\text {th }}$ pair
(d) Sternum (iv) One
A. $a-i v, b-i i i, c-i i, d-i$
B. $a-i, b-i i, c-i i i, d-i v$
C. $a-i, b-i i i, c-i i i, c-i i, d-i v$
D. $a-i i i, b-i, c-i i, d-i v$

## Answer: D

## - Watch Video Solution

149. Which of the following is/are not correctly matched pairs?
(i) Ball and socket joint -Between humerus and pectoral girdle
(ii) Pivot joint - Between carpal and metacarpal
(iii) Saddle joint - Between atlas and axis
(iv) Gliding joint - Between the carpals
(v) Fibrous joint - In flat skull bones
A. $a-v, b-i v, c-i i i, d-i i, e-i$
B. $a-i, b-i i, c-i i i, d-v, e-i v$
C. $a-v, b-i i i, c-i i, d-i, e-i i$
D. $a-i, b-i i i, c-i i, d-v, e-i v$

## Answer: A

## - Watch Video Solution

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

Pairs of skeletal parts
A.
(1) Sternum and ribs
B.
(1) Calvical and Glenoid cavity

Category
Axial skeleton
Category
Pelvic girdle
C.
Pairs of skeletal parts

- Category
(1) Humenerus and ulna
Appendicular skeleton
Pairs of skeletal parts
. Category
D. (1) Malleus and stapes
Ear ossicles


## Answer: B

## - Watch Video Solution

151. Read the following statements ( $i-i v$ ) and accordingly mark the option that has both statements .

The Cardiac fiber are brandhed with one or more nuclei.
The Striated muscles can be branched or unbranched
The Involuntary muscles are non-striated
The Smooth muscles are unbranched and cylindrical
A. $i$ and $i i i$
B. $i i$ and $i v$
C. $i i$ and $i i i$
D. $i$ and $i i$

## Answer: A

## - Watch Video Solution

152. Which one of the following option is incorrect ?
A. Pivot joint - between atlas, axis and occipital condyle
B. Gliding joint - between the carpals
C. Saddle joint - between carpals and metacarpals of thumb
D. Hinge joint - between Humerus and pectoral girdle

## Answer: D

## - Watch Video Solution

153. Select the total number of false statement from the following
(i) The globular head is an active ATPase enzyme and has binding sites for ATP and active sites for Myosin.
(ii) Each Myosin (think) filament is also a polymerized protine.
(iii) Many monomeric proteins celled Meromyosins canstitute one thick filament.
(iv) Each meromyosin has two important parts, a globular head with a short arm and a til, the former being

Called the heavy meromyosin (HMA) and the latter, the light meromysin (LMN).
(v) The HMM component, i.e., the head and short arm projects outwards at regular distance and angle from
each other from the surface of a polymerized myosis filament and is known as cross arm
A. 5
B. 4
C. 2

## 0 <br> Watch Video Solution

154. Ideentify A to D in given figure 20.32

A. A-Muscle fiber, B-Sarcolema, C-Blood capillary, D-Muscle bundle
B. A-Muscle fiber, B-Sarcolema, C-Muscle bundle, D -Blood capillary
C. A-Muscle fiber, C-Sarcolema, B-Blood capillary, D-Muscle bundle
D. C-Muscle fiber, D-Sarcolema, A-Blood capillary, B-Muscle bundle

## Answer: A

## - Watch Video Solution

155. In the given figure, identify vertebral column and sternum

A. A and C
B. A and B
C. C and B
D. C and A

Answer: B
156. An action (thin) filament figure is given below. Classify A and D.

A. Troponin and Tropomyosin.
B. Tropomyosin and F - Actin
C. Troponin and F - Actin
D. F - Actin and Tropomyosis

## Answer: C

## - Watch Video Solution

157. The following diagram (Figure 20,35 ) describes the muscle contraction . Identify A to D

A. A - Cross bridge, B-Silding/Rotation , C - Breaking of cross bridge, D-

Actin filament
B. A - Cross bridge, B-Actin filament, C-Sliding /Rotation, D-Breaking of cross bridge.
C. A - Cross bridge, B-Silding/Rotation , C - Actin filament , D-Breaking of cross bridge
D. A - Breaking of cross bridge, B- Actin filament, C-Silding/Rotation , DCross bridge,

## Answer: A

158. In given figure 20,36 , identify $A$ to $C$

A. A-Actin binding sites, B-Head, C- ATP binding sites
B. A-Head, B-Actin binding sites, C- ATP binding sites
C. A- ATP binding sites, B-Actin binding sites, C-Head
D. A-ATP binding site, B-Head, C- Actin binding sites

## Answer: B

## - Watch Video Solution

159. In frog, the verteba with an anterior convex surface is

## A. Atlas

B. Urostyle
C. 8th vertebra
D. 9th vertebra

## Answer: D

## - Watch Video Solution

160. Obturator foramen is found in :
A. Frog's pelvic girdle
B. Frog's pectoral girdle
C. Rabbit's pelvic girdle
D. Rabbit's pectoral girdle

## Answer: C

161. Largest smooth muscles occur in
A. Leg
B. Thigh
C. Uterus of pregnant woman
D. Urethra

## Answer: C

## - Watch Video Solution

162. Pelvic girdle of rabbit consist of
" " Or
IN mammals, each half of pelvic girdle or obturator foramen in pelvic girdle is formed by
A. Ilium, ischium, and pubis
B. Ilium,ischium and coracoid
C. Coracoid, scapula and clavicle
D. Ilium, coracoid and scapula

## Answer: A

## - Watch Video Solution

163. The parasphenoid bone in frog forms
A. Base of cranium
B. Floor of cranium
C. Dorsal side of cranium
D. Dorsolateral side of cranium

## Answer: B

## - Watch Video Solution

164. Ear ossicle, incus is modified
A. Jugal
B. Articular
C. Quadrate
D. Hyomandibular

## Answer: C

## D Watch Video Solution

165. Which of the following is/are not carrectly mathched pairs ?

## Column-I Column-II

(i) Ball and socket Between humerus and pectoral girdle
(ii) Pivot joint Between carpal and metacarpal
(iii) Saddle joint Between atlas and axis
(iv) Gliding joint Between the carpals
(v) Fibrous joint In flat skull bones
A. (ii) and (iii)
B. (i) and (iv)
C. (v) only
D. (ii) only

## Answer: A

## - Watch Video Solution

166. Examine the figure of pectoral girdle and forelimb, and identify the parts labelled as A, B, C and D
A.
A
B
C
D
Clavicle
Humerus
Radius
Carpals
B. A
B
C
D
B. Scapula
Femur
Ulna
Tarsals
C. Clavicle
D. $\begin{gathered}\text { A } \\ \text { Scapula }\end{gathered}$
B
C
D
Carpals

## D

Tarsals
167. Identify the parts labelled as $A$ to $E$ in the given figure of a vertabral columm and select the correct option .
(\#\#CEN_BIO_P1_C2O_E01_167_Q01.png" width="80\%">
A.
. A
B
C
D
E

| Thoracic | Carvical | Lumber | Sacrum | Coccyx |
| :---: | :---: | :---: | :---: | :---: |
| vertabra | vertabra | vertabra |  |  |

B.
. A
B
C
D
E
Thoracic Carvical Lumber Coccyx Sacrum
vertabra vertabra vertabra
C.

| A | B | C | D | E |
| :---: | :--- | :--- | :---: | :---: |
| Thoracic | Thoracic | Carvical | Coccyx | Sacrum |
| vertabra | vertabra | vertabra |  |  |
|  |  |  |  |  |

- A
B
C
D
E

| Thoracic | Thoracic | Lumber | Sacrum | Coccyx |
| :--- | :--- | :--- | :--- | :--- |
| vertabra | vertabra | vertabra |  |  |

## - View Text Solution

168. Examine the given diagrammatic view of human skull given below and identify the skull bones labelled from A-D.


| A. | A | B | C |
| :--- | :--- | :--- | :--- |
| Frontal | Temporal | Maxilla | Mandible |
| B. | A | B | C |

## - Watch Video Solution

169. Match column I with column II and select the correct option from the codes given below.

# Column I <br> (Skeletal part) 

A. Cranium
B. Skull (Cranial and
facial bones)
C. Face
D. Hind limb
E. Ribs

## Column II <br> (Number of bones)

(i) 29
(ii) 8
(iii) 14
(iv) 24
(v) 30
A. A - (i), B - (ii), C - (iii), D - (v), E-(iv)
B. A-(ii), B-(i), C - (iii), D-(v), E-(iv)
C. A-(i), B-(ii), C - (iii), D-(iv), E-(v)
D. A-(v), B-(iv), C - (iii), D-(ii), E-(i)

## - Watch Video Solution

170. The figure Is showing part of right pelvic girdle and lower limb nones.

Identify the parts labelled as A to E and select the correct option.


A.

| . A | B | C | D | E |
| :---: | :---: | :--- | :--- | :---: |
| secrum | Pubis | Patella | Metatarsal | Fibula |
| B. A | B | C | D | E |
| Ilium | Ischium | Femar | Tibia | Fibula |
| C. A | B | C | D | E |
| Ilium | Ischium | Femar | Fibula | Tibia |
| D.A <br> Ischium | B | Clium | Petella | Dibia |
|  |  | Tarsal |  |  |

## D Watch Video Solution

171. Study the following flowchart and fill up the blanks by selecting the correct option.

A.
A
B
C
D
(1) Thoracic skeleton Limbs
Skull
Ribs
B.

- A
B
C
D
(1) Appendicular skeleton Skull
Ribs
Limbs
C.
- A
B
C D
(1) Appendicular skeleton Limbs
Ribs
Skull
D.
A
B
C
D
(1) Lumber skeleton
Limb
Skull
Ribs


## Answer: B

## - Watch Video Solution

172. Trochanters occur in
A. Humerus
B. Femur
C. Radio-ulna
D. Tibia-fibula

## Answer: B

173. Feeling of fatigue after running fast for some time is due to
A. Loss of energy
B. Accumulation of lactic acid is muscle
C. Formation of scuccinic acid
D. Formation of biuret crystals

## Answer: B

## - Watch Video Solution

174. Acetabulum is part of
A. Pelvic girdle
B. Pectoral girdle
C. Fore arm
D. Upper arm

## Answer: A

## - Watch Video Solution

175. Number of vertebrae in axial skeletal of frog urostyle is
A. 10
B. 12
C. 15
D. 9

## Answer: D

## - View Text Solution

176. Coccygeal bone occurs in
A. Skull
B. pectoral girdle
C. Vertebra column
D. Pelvic girdle

## Answer: B

## - Watch Video Solution

177. From ourter to inner side, the squence of three bones present in the middle ear of mammals is
A. Incus, malleus, stapes
B. Stapes, incus, malleus
C. Malleus, incus, stapes
D. Malleus, stapes, incus

## Answer: C

178. An acromian process is characteristically found in the
A. Pelvic girdle of mammals
B. Pectoral girdle of mammals
C. Skull of frog
D. Sperm of mammals

## Answer: B

## - Watch Video Solution

179. Which of the following is correct
A. Axial skeletal system of human consist 80 bones
B. Human have 12 pairs of Ribs
C. 6 ear ossicle present in human
D. All are Correct

## Answer: B

## - Watch Video Solution

180. 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 and Reason are ture and the Reason is the correct explanation of the Assertion.
B. If both Assertion and Reason are ture, but the Reason is not the correct explanation of the Assertion.
C. If Asserion is ture, but Reason is false .
D. If both Assertion and Reason are false.

## Answer: D

## - Watch Video Solution

181. Assertion : $C a^{2+}$ plays important role in the muscle contraction. Reason : $\mathrm{Ca}^{2+}$ Combines with troponin chain, displacing tropomyosin allowing the myosin head part to combine with actin to from actomyosin complex .
A. If both Assertion and Reason are ture and the Reason is the correct explanation of the Assertion.
B. If both Assertion and Reason are ture, but the Reason is not the correct explanation of the Assertion.
C. If Asserion is ture, but Reason is false .
D. If both Assertion and Reason are false.

## Answer: A

182. 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 and Reason are ture and the Reason is the correct explanation of the Assertion.
B. If both Assertion and Reason are true, but the Reason is not the correct explanation of the Assertion.
C. If Assetrion is true, but Reason is false .
D. If both Assertion and Reason are false.

## Answer: D

## - Watch Video Solution

183. 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 and Reason are ture and the Reason is the correct explanation of the Assertion.
B. If both Assertion and Reason are ture, but the Reason is not the correct explanation of the Assertion.
C. If Asserion is ture, but Reason is false .
D. If both Assertion and Reason are false.

## Answer: D

## - Watch Video Solution

184. 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 and Reason are ture and the Reason is the correct explanation of the Assertion.
B. If both Assertion and Reason are ture, but the Reason is not the correct explanation of the Assertion.
C. If Asserion is ture, but Reason is false .
D. If both Assertion and Reason are false.

## Answer: C

## - Watch Video Solution

185. Assertion : Skeleton helps in blood cell formation.

Reason: Blood flows through skeleton.
A. If both Assertion and Reason are ture and the Reason is the correct explanation of the Assertion.
B. If both Assertion and Reason are ture, but the Reason is not the correct explanation of the Assertion.
C. If Asserion is ture, but Reason is false .
D. If both Assertion and Reason are false.

## Answer: C

## - Watch Video Solution

186. Assertion : Skeleton serves as a storage depot.

Reason : Skeleton stores carbohydrate and protein.
A. If both Assertion and Reason are ture and the Reason is the correct explanation of the Assertion.
B. If both Assertion and Reason are ture, but the Reason is not the correct explanation of the Assertion.
C. If Asserion is ture, but Reason is false .
D. If both Assertion and Reason are false.

## Answer: C

## - Watch Video Solution

187. Assertion : Ball and socket joints are the most mobile joints.

Reason: Synovial fluid is present here.
A. If both Assertion and Reason are ture and the Reason is the correct
explanation of the Assertion.
B. If both Assertion and Reason are ture, but the Reason is not the correct explanation of the Assertion.
C. If Asserion is ture, but Reason is false .
D. If both Assertion and Reason are false.

## Answer: B

## - Watch Video Solution

188. Assertion : Arthritis or inflammation of a joint makes the joint painful.

Reason : Some toxic substances are deposited at the joint
A. If both Assertion and Reason are ture and the Reason is the correct explanation of the Assertion.
B. If both Assertion and Reason are ture, but the Reason is not the correct explanation of the Assertion.
C. If Asserion is ture, but Reason is false .
D. If both Assertion and Reason are false.

## Answer: C

189. Assertion : The contraction and relaxation of muscle fiber are controlled by nerve impulses.

Reason : The threshold stimulus is the minimum stimulus required for the beginning of contraction.
A. If both Assertion and Reason are ture and the Reason is the correct explanation of the Assertion.
B. If both Assertion and Reason are ture, but the Reason is not the correct explanation of the Assertion.
C. If Asserion is ture, but Reason is false .
D. If both Assertion and Reason are false.

## Answer: B

## D Watch Video Solution

1. Which one is anatomically correct
A. Collar bones-3 pairs
B. Salivary glands -1 pairs
C. Cranuak nerves -10 pairs
D. If both Assertion and Reason are false.

## Answer: D

## - Watch Video Solution

2. 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 - 3
D. Amino acids found in proteins -16

## Answer: C

## - Watch Video Solution

3. Elbow joint is an example of
A. Ball and socket joint
B. Pivot joint
C. Hinge joint
D. Gliding joint

## Answer: C

## - Watch Video Solution

4. Which one is a correct match of three items and their grouping category ?
(A) Cytosine, uracil,

- Pyrimidines thiamine
(B) Malleus, incus, cochlea - Ear ossicles
(C) Ilium, ischium, pubis
(D) Actin, myosin, rhodopsin
- Coxal bones of pelvic girdle
- Muscle proteins.
Items
A. Cytosine, uracil, thiamine

Groups
Pyrimidines Groups
B. $\begin{aligned} & \text { Items } \\ & \text { Malleus, incus, cochlea }\end{aligned}$
C. Items
C. Ilium, ischium pubis, Items
D. Actin, myosin, rodopsin
A. Myasthenia gravis-Auto innnune disorder which inhibits sliding of
myosin filaments
B. Gout-inflammation of joints due to extra deposition of calcium
C. Muscular dystrophy-age rlated shorting of muscles
D. Osteoporosis- decrease in bone mass and higher chances of fractures with advacing age

## Answer: D

## - Watch Video Solution

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

Characterstics
(a) Lymph filled between two bones, limited movement
(b) Fluid cartilage between two bones, limited movements
(c) Fluid filled between two joints, provides cushion
(d) Fluid filled synovial cavity between two bones

Examples
A. Fluid-filled between, two skull bones joints, provides cushion

Characteristics
B. Fluid-filled synovial cavity bet ween two bones
Characteristics
C. Lymph-filled between two bones, limited movement gliding Characteristics
D. Fluid cartilage between two bones, limited movements

## Answer: B

## - Watch Video Solution

7. Select the correct statement with respect to locomotion in humans
A. The accumulation of uric acid crystals in joints causes their inflammation.
B. The vertebral column has 10 thoracic vertebrae.
C. The joint between abjacent vertebrae is a fibrous joint.
D. A decreased level of progsterone causes osteoporosis in old people.
8. Which of the following is not a functioin of the skeletal system
A. Locomotion
B. production of erythrocytes
C. Storage of minerals
D. Production of body heat

## Answer: D

## - Watch Video Solution

9. Which of the following joints would allow no movement
A. Ball and socket joint
B. Fibrous joint
C. Cartilaginous joint
D. Synovial joint

## Answer: B

## - Watch Video Solution

10. The H -zone in the skeletal muscle fibre is due to
A. the absence of myofibrils in the central portion of A-band
B. the central gap between myosin filaments in the A-band
C. the central gap between actin filaments extending through myosin
filaments in the A band
D. extension of myosin filaments in the central portion of the A-band.

## Answer: C

11. Smooth muscles are
A. Involuntary, cylindrical, striated
B. Voluntary, spindle-shaped, uninucleate
C. Involuntary, spindle-shaped, non-striated
D. Voluntary, multinucleate, cylindrical

## Answer: C

## - Watch Video Solution

12. Osteoporosis, an age related disease of skeletal system, may occur due to
A. Decreased level of estrogen
B. Acccumulation of uric acid leading to inflammation of joints.
C. Immune disorder affecting neuro-muscular junction leading to fatigue.
D. Hingh con centration of $\mathrm{Ca}^{++}$and $\mathrm{Na}^{+}$

Answer: A

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