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## BIOLOGY

# BOOKS - TRUEMAN'S BIOLOGY (ENGLISH) 

## LOCOMOTION AND MOVEMENTS

## Multiple Choice Question

1. Striped muscle are
A. syncytial
B. uninucleate
C. spindle shaped
D. noen of these

## Answer: A

2. Functional unit of skeletal muscle is called
A. Sarcolemma
B. Z-band
C. Sarcomere
D. Sarcoplasm

## Answer: C

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3. Sarcomere is the part between two
A. H -lines
B. A-lines
C. I-lines
D. Z-lines

## Answer: D

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4. Statements

A-bands of the muscle are dark and contain myosin

I-band are the light bands and contain action

During muscle contration the A-band contracts

The part between the two Z-lines is called as saromere

The central part of thin filament, not over-lapped by thick filament is called H -zone of the above statements.
A. A,C,E are correct while, B,D are incorrect
B. $A, B, C$ and $E$ are correct while $D$ is incorrect
C. A,B and D are correct while C and E are incorrect
D. A,B and C are correct while D and E are incorrect

## Answer: C

## D Watch Video Solution

5. H-zones are found in
A. myofibril of unstriated muscle
B. myofibril of striated muscle
C. light band
D. none of the above

## Answer: B

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6. Major protein in the thick filaments of skeletal muscle fibre is
A. actin
B. mysoin
C. troponin
D. tropomysoin

## Answer: B

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7. Myosin myofilaments are
A. attached to the Z-disk
B. absent from the H-zone
C. found primarly in the I-band
D. none of the above

## Answer: D

8. The largest muscle in the human body is
A. gluteus maximus
B. stapedius
C. sartorius
D. masseter

## Answer: A

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9. Smallest muscle in the human body is
A. stapes
B. sartorius
C. stapedius
D. spinal muscle

## D Watch Video Solution

10. Quadriceps and gastrocnemius muscles lie in
A. lower limb
B. hands
C. wrist
D. shoulder

## Answer: A

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11. Smooth muscles are
A. involuntary, spindle shaped, uninucleated, unbranched
B. voluntary, multinucleate and cylindrical
C. involuntary, cylindrical, mutinucleate
D. voluntary, branched, uninuclear

## Answer: A

## D Watch Video Solution

12. Largest smooth muscle is present in
A. leg
B. thigh
C. heart
D. uterus of pregnant woman

## Answer: D

13. Striated muscles contract becauses of
A. sliding of myosin filaments on actin filaments
B. sliding of actin filaments on myosin filaments
C. myosin filaments coming close to each other
D. actin filaments sliding over one another

## Answer: B

## - Watch Video Solution

14. During muscle contraction
A. size of l-band increases
B. diameter of fibre increases
C. size of A-bands remains same
D. Size of H-zone becomes larger

## Answer: C

## D Watch Video Solution

15. When a skeletal muscles shortens during contraction, which of these statements is false?
A. The I-bands shorten
B. The A-bands shorten
C. The H-bands shorten
D. The sarcomeres shorten

## Answer: B

## - Watch Video Solution

16. Which statement is correct for muscle contraction?
A. Length of H -zone decreases
B. Length of A-band decreases
C. Length of two Z-line increases
D. Length of I-band remains constant

## Answer: A

## - Watch Video Solution

17. During contraction of skeletal muscle $C a^{2+}$ bind to
A. actin
B. troponin
C. tropomyosin
D. myosin ATPase

## Answer: B

18. The long protein mulecule, which masks the active sites on the f-actin is
A. myosin
B. troponin
C. tropomyosin
D. light meromyosin

## Answer: C

## - Watch Video Solution

19. Which of these statements about the molecular structure of myofilaments is ture?
A. ATPase is found on troponin
B. Tropomoyosin has a binding site for $\mathrm{Ca}^{2+}$
C. Troponin bind to the rodike portion of myosin
D. The head of the myosin molecule binds to an active site on actin

## Answer: D

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20. Which yield ATP during muscle contraction?
A. Oxygen
B. Myoglobin
C. Cholesterol
D. Creatine phosphate

## Answer: D

21. The lactic acid generated during muscle contraction in coverted to glycogen mainly in
A. liver
B. muscle
C. adrenals
D. pancreas

## Answer: A

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22. During fatigue
A. muscle fails to relax
B. muscle fails to be stimulated
C. blood circulation in muscles stops
D. motor nerve does not respond to external stimulus

## Answer: B

## D Watch Video Solution

23. Stimulus several times greater than threshold stimulus is provided to muscle fibre. It will
A. undergo tetany
B. contract slightly
C. contract forcefully
D. contract with same force

## Answer: D

## - Watch Video Solution

24. Muscle activity of our body
A. decreases BMR
B. decreases venous return
C. increases body temperature
D. reduces blood and lymph flow

## Answer: C

## - Watch Video Solution

25. The muscles which contract to produce opposite movements at the same joint are called
A. synergists
B. antagonists
C. prime movers
D. none of these
26. Which of the following are not antagonistic muscles?
A. Flexor and extensor
B. Pronator and supinator
C. Abductor and adductor
D. Protractor and supinator

## Answer: D

## - Watch Video Solution

27. Biceps and triceps surround
A. ulna
B. femur
C. radius
D. humerus

## Answer: D

## - Watch Video Solution

28. The muscles which on contraction rotates the foream the make palm
face upward and forward is
A. pronator
B. supinator
C. abductor
D. adductor

## Answer: B

29. When body part moves towards the median axis, it is called
A. adductor
B. pronator
C. abductor
D. supinator

## Answer: A

## - Watch Video Solution

30. For the elbow joint, triceps is
A. flexor
B. extensor
C. adductor
D. retractor

## Answer: B

## - Watch Video Solution

31. Spreading the fingers aparts is
A. rotation
B. flexion
C. abduction
D. depression

## Answer: C

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32. Red muscle fibres are rich in
A. cholesterol
B. lysosomers
C. microsomes
D. mitochondria

## Answer: D

## D Watch Video Solution

33. Which of the following statements is not ture?
A. White muscle fibres are rich in mitrochondria
B. Muscles of eyeball movements are white fibres
C. Red muscle fibres are slower in contraction rate
D. White muscle fibres depend mainly on anaerobic glycolysis

## Answer: A

34. Red muscle are rich in
A. relaxin
B. myosin
C. lactic acdi and acetic acid
D. myoblobin and cytochrome

## Answer: D

## - Watch Video Solution

35. A single isolated contraction of the muscle fiber is called
A. twitch
B. fatigue
C. tetanus
D. contraction

## - Watch Video Solution

36. A sustained state of contraction caused by rapid succession of many stimuli is
A. twitch
B. fatigue
C. tetanus
D. contracture

## Answer: C

## - Watch Video Solution

37. Which of the following is a short bone?
A. carpal
B. patella
C. Sternum
D. Humerus

## Answer: A

## - Watch Video Solution

38. Which of the following is a flat bone?
A. Tibia
B. Tarsal
C. Malleus
D. Sternum

## Answer: D

39. The smallest irregular bone in man is
A. Nasal
B. stapes
C. patella
D. palatine

## Answer: B

## - Watch Video Solution

40. Long bones of mammals provide
A. support only
B. support and produce RBCs only
C. support and produce WBCs only
D. support and produce RBCs and WBCs

## Answer: D

## - Watch Video Solution

41. Ends of the long bones are covered by
A. tendons
B. cartilage
C. ligaments
D. blood cells

## Answer: B

## - Watch Video Solution

42. Bone formed by the ossification of a tendon is called
A. dermal bone
B. cartilage bone
C. sesamoid bone
D. membrane bone

## Answer: C

## D Watch Video Solution

43. Which one is formed by the ossifaication of tendon?
A. Tibia
B. patella
C. Trapezoid
D. Calcaneum

## Answer: B

44. Total number of bones in the adult human is
A. 206
B. 406
C. 106
D. 306

## Answer: A

## - Watch Video Solution

45. Which of these is a part of appendicular skeleton?
A. Ribs
B. Cranium
C. Clavicle
D. Vertebrae

## Answer: C

## - Watch Video Solution

46. Number of bones in human appendicualar skeleton is
A. 80
B. 126
C. 120
D. 142

## Answer: B

## - Watch Video Solution

47. Find out the correct order of number of bones in the parts of skull such as cranial bones, facial bone, hyoid bone and middle ear bonds respectively
A. 14, 8, 1 and 3
B. $3,8,14$ and 1
C. $8,14,1$ and 3
D. $14,8,3$ and 1

## Answer: C

## - Watch Video Solution

48. Cheek bones are
A. parietals
B. ethomoids
C. lacrimals
D. zygomatic

## Answer: D

## - Watch Video Solution

49. Foramen magnum is present at
A. base of skull
B. base of brain
C. base of medulla
D. apex of vertebal column

## Answer: A

## - Watch Video Solution

50. The only movable bone in the skull is
A. mandible
B. maxilla
C. ethmoid
D. none of these

## Answer: A

## - Watch Video Solution

51. Lower jaw of man is made up of
A. 1 bone
B. 2 bones
C. 3 bones
D. no bones, only muscles

## Answer: A

52. Hyoid bones is located at the
A. front of the skull
B. behind the skull
C. top of the buccal cavity
D. floor of the buccal cavity

## Answer: D

## - Watch Video Solution

53. The number of vertebrae present in cervical, theoracic, lumbar, sacral and coccyx regions are respectively
A. 7,12,5,1,1
B. 7,5,1,12,1
C. 12,7,5,1,1,

## D. 1,7,5,12,1

## Answer: A

## - Watch Video Solution

54. Consider the following statements
A. In man, vertebral column has 33 verte brae organized as 28 bones.
B. Pelvic gridle is made up of two fused bones only.
C. Osteoporisis is characterized by microar chitectural deteriration of the bone.
A. A alone is correct
B. B alone is correct
C. C alone is correct
D. C alone is incorrect

## Answer: C

55. In man, coccygeal bone is formed by the fusion of...... vertebrae.
A. 3
B. 4
C. 5
D. 6

## Answer: B

## - Watch Video Solution

56. Which of the following form thoracic cage of man?
A. Ribs and sternum
B. Ribs and thoracic vertebrae
C. Ribs, sternum and lumber vertebrae
D. Ribs, sternum and throraic vertebrae

## Answer: D

## - Watch Video Solution

57. Manubrium is a part of
A. Skull
B. Pelvic girdle
C. Thoracic
D. Pectoral girdle

## Answer: C

## D Watch Video Solution

58. Ribs attached to sternum are
A. first seven pairs
B. all ten ribs
C. first ten rib pairs
D. first five rib pairs.

## Answer: A

## D Watch Video Solution

59. Floating ribs of thoracic cage are
A. 1st to $7^{\text {th }}$ pair
B. 8th to 9th pair
C. 8th to 10th pair
D. 11th to 12 th pair

## Answer: D

60. Which of the these statements concerning ribs is true?
A. There are five pairs of floating ribs
B. Floating ribs do not attach to vertebrae
C. The head of the rib attaches to the manubrium of sternum
D. The true ribs attach directly to the sternum with costal cartilage

## Answer: D

## - Watch Video Solution

61. Which one is a part of pectorall girdle?
A. Ilium
B. Ischium
C. Acetabulum
D. Glenoid cavity

## Answer: D

## - Watch Video Solution

62. Collar bone' is
A. patella
B. scapula
C. clavicle
D. coracoid

## Answer: C

## - Watch Video Solution

63. The point where the scapula and clavicle articulate is
A. glenoid cavity
B. coracoid process
C. trochlea
D. acromion process

## Answer: D

## - Watch Video Solution

64. When comparing the pectoral girdle with the pelvic girdle which of the these statements is true?
A. The pelvic girdle is more firmly attached to the body then the pectoral girdle
B. The pectoral girdle has the limbs more securely attached than the pelvic girdle
C. The pelvic girdle allows greater mobility than the pectoral girdle
D. The pectoral girdle has greater mass than the pelvic girdle

## Answer: A

## - Watch Video Solution

65. How many bones are present in our arms?
A. 32
B. 60
C. 45
D. 25

## Answer: B

## - Watch Video Solution

66. Number of wrist bones is
A. 8
B. 9
C. 7
D. 6

## Answer: A

## - Watch Video Solution

67. Consider the diagram given below


Parts as (a), (b),(c ),(d) and € respectively indicate
A. Ilium, femur,tibia,pubis,and sacrum
B. Pubis,femur,tibia,ilium and sacrum
C. Pubis,tibia,femur,ilium and secrum
D. Pubis, femur, ilium tibia, and sacrum

## Answer: B

## - Watch Video Solution

68. The total number of bones in the hindlimb of a man is
A. 14
B. 21
C. 24
D. 30

## Answer: D

## - Watch Video Solution

69. The bone of the foot to which the tibia is attached is
A. talus
B. metatarsals
C. phalangers
D. calcaneus

## Answer: A

## - Watch Video Solution

70. Digital formula of both limbs in man is
A. $2,3,3,4,3$
B. 2,3,3,3,3
C. $3,3,3,3,2$
D. 2,2,3,3,3

## Answer: B

## - Watch Video Solution

71. Immovable joint is
A. synarthrodial
B. amphiarthrodial
C. diarthodial
D. all of these

## Answer: A

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72. The type of joint between the human skull bones is
A. hinge
B. fibrous
C. synovial
D. cartilaginous

## Answer: B

## D Watch Video Solution

73. Sutural joints are found between
A. parietals of skull
B. thumb and metatarsal
C. humerus and radio-unla
D. glenoid cavity and pectoral girdle

## Answer: A

74. Which of the following is a cartilaginous joint?
A. Suture
B. Elbow joint
C. Synovial joint
D. Pubic symphysis

## Answer: D

## - Watch Video Solution

75. The joint where synovial cavity is absent
A. carpals
B. finger and toes in males
C. pubic symphysis in females
D. femur and pelvis in females

## Answer: C

## D Watch Video Solution

76. What is the joint between sternum and ribs in humans
A. Fibrous joint
B. gliding joint
C. angular joint
D. cartilaginous joint

## Answer: D

## - Watch Video Solution

77. Articular cartilage of synovial joint is
A. fibrocartilage
B. elastic cartilage
C. hyaline cartilage
D. all of these

## Answer: C

## D Watch Video Solution

78. Synovial joint occurs between
A. pubic bones
B. centra of two vertebrae
C. two skull bones
D. humerus and ulna

## Answer: D

79. In locomotion, movement between two structures of which one of the following sets takes part in man?
A. skull and atlas
B. Humerus and ulna
C. Femur and pelvic girdle
D. Humerus and pectoral girdle

## Answer: C

## - Watch Video Solution

80. Joint between Incus \& stapes is : -
A. hinge joint
B. gliding joint
C. pivotal joint
D. ball and socket joint

## Answer: D

## D Watch Video Solution

81. Hinge joint is present in our body between
A. thumb and trapezium
B. humerus and scapula
C. humerus and radio-ulna
D. first and second vertebra

## Answer: C

## - Watch Video Solution

82. Saddle joint occurs between
A. carpal and first metacarpal
B. femur and pelvic girdle
C. all the vertebrae
D. phalanges

## Answer: A

## - Watch Video Solution

83. The articulation of odontoid process of axis and atlas is an example of
A. pivot joint
B. synovial joint
C. ball and socket joint
D. none of these

## Answer: A

84. Which of the these joint is correctly matched with the type of joint?
A. Atlas to occipital condyle - Pivot
B. Tarsals to metatarsals - saddle
C. Tibia to talus - Hinge
D. Femur to coxal bone - Ellipsoid

## Answer: C

## - Watch Video Solution

85. An example of gliding joint is
A. femur and fibiofibula
B. humerus and glenoid cavity
C. zygapophyses of adjacent vertebrae
D. occipital condyle and atlas

## Answer: C

## - Watch Video Solution

86. Which of the following permits movement of articulating bones around two axes?
A. Hinge joint
B. Ball \& socket joint
C. Sutures
D. Ellipsoid joint

## Answer: D

## - Watch Video Solution

87. In old age, stiffness of joints is due to the
A. higher viscosity of synovial fluid
B. decreases in synovial fluid
C. increase in synovial fluid
D. none of above

## Answer: B

## - Watch Video Solution

88. Gout is a disease that affects the joints and leads to arthritis. It is associated with an abnormality of
A. fat metabolism
B. purine metabolism
C. protein metabolism
D. pyrimidine metabolism
89. Study of following
a. The accumulation of pyruvic acid in the muscle cause fatigue
B. ATP is resynthesized in the muscle by the phosphorylation of ADP by a phosphagen.
C. Cori and Cori cycle occurs in the liver
D. The phosphagen in the vertebrate muscle is arginine phosphate.

The correct set of answers for muscle contraction is
A. A and D
B. B and D
C. C and D
D. B and C

## Answer: D

90. In the pelvic girdle of man $A, B, C, D$ and $E$ respectively represent

A. A = Pubis, $B=$ Acetabulum, $C=$ Ilium,
$\mathrm{D}=$ Ischium, $\mathrm{E}=$ Public symphysis
B. $A=$ Ilium, $B=$ Acetabulum, $C=$ Pubis

D= Ischium E = Pubic Symphysis
C. $A=$ Ischium, $B=$ Acetabulum, $C=$ pubis,

D = Ilium, E = Pubic symphysis
D. $A=$ lisum, $B=$ Pubsis, $C=$ Acetabulum
$D=$ Pubic symphysis, $E=$ Ischium

## Answer: B

## - Watch Video Solution

91. It is an outcome of irregularties in metabolism of nitrogenous waste
A. Osteoporosis
B. Osteoarthritis
C. Gouty arthritis
D. Rheumatoid arthritis

## Answer: C

## D Watch Video Solution

92. Upon stimulation of skeletal muscles, calcium is immediately made available for binding to troponin from
A. bone
B. blood
C. lymph
D. sarcoplasmic reticulum

## Answer: D

## D Watch Video Solution

93. This facial bone is unpaired
A. vomer
B. nasal
C. lacrimal
D. palatine

## Answer: A

94. The longest bone of the human body is
A. tibia
B. incus
C. femur
D. vertebra

## Answer: C

## - Watch Video Solution

95. Skeletal muscles are controlled by
A. autonomic nerves
B. somatic nerves
C. sympathetic nerves
D. parasympathetic nerves

## Answer: B

## - Watch Video Solution

96. Which one of the following is wrongly matched?
A. Red muscle-Myoglobin
B. Troponin - Protein of mysosin filament
C. Tendon - Connective tissue
D. Myosin - contractile protein

## Answer: B

## - Watch Video Solution

97. The generation of excitation-contraction coupling involves all the following events except
A. hydrolysis of ATP to ADP
B. Confirmational change in troponin
C. releases of calcium from troponin
D. formation of cross linkages between actin and myosin

## Answer: C

## - Watch Video Solution

98. In human beings the cranium is formed by
A. ten bones of which two are paired
B. eight bones of which two are paired
C. fourteen bones of which six are paired
D. eight bones of which three are paired

## D Watch Video Solution

99. The number of occipital condyles in man is/are
A. one
B. two
C. three
D. four

## Answer: B

100. Match the following and choose the correct option

Types of synovial joints Bones involved

Ball and socket
Hinge
Pivot
Saddle

1. Carpal and metacarpal of thumb
2. Atlas and axis
3. Frontal and parietal
4. Knee
5. Humerus and pectoral girdle
A. $A=1, B=3, C=4, D=5$
B. $A=5, B=4, C=2, D=1$
C. $A=5, B=4, C=3, D=1$
D. $A=1, B=2, C=5, D=4$

## Answer: B

## - Watch Video Solution

101. The ellipsoidal joint is found in
A. hip
B. knee
C. shoulder
D. radius and scaphoid of hand

## Answer: D

## - Watch Video Solution

102. Which of the following statements about the mechanism of muscle contraction are correct ?
(i) Acetylcholine is released when the neural signal reaches the motor end plate.
(ii) Muscle contraction is initiated by a signal sent by CNS via sensory neuron.
(iii) During muscle contraction, isotropic band gets elongated. (iv) Repeated activation of the muscles can lead to lactic acid accumulation.
103. Actin binding sites are located over
A. troponin
B. tropomyosin
C. meromyosin
D. both troponin and tropomysoin

## Answer: C

## - Watch Video Solution

104. The scapula is a large triangular flat bone situated in the dorsal part of the thorax between
A. second and fifth ribs
B. third and sixth ribs
C. third and eighth ribs
D. second and seventh ribs

## Answer: D

## - Watch Video Solution

105. The coxal of the pelvic girdle is formed by the fusion of
A. ilium and scapula
B. clavicle and pubis
C. scapula and clavicle
D. ilium, ischium and pubis

## Answer: D

## - Watch Video Solution

106. Which one of the followign pairs of substances and function is not correctly matched?
A. actin : slides past myosin causing contraction
B. Calcium : Triggers enzymatic action of Myosin
C. ATPase : Enzyme that splits ATP
D. ATP : Supplies energy for breaking Actomyosin

## Answer: B

## - Watch Video Solution

107. Read the following statements
(i) In cardiac muscle fibres sacroplasmic reticulum is poorly formed
(ii)B Blood supply is scanty in case of smooth muscle fibres
(iii) Tropomyosin occurs in actin filaments in the form of complexes which are arranged over actin fibres and represent sites where myosin binds to actin.
(iv) Salts of citrate and oxalates act as anticoagulants as they precipitate $C^{2+}$
A. (i),(ii),(iii)
B. (i),(iii),(iv)
C. (ii),(iii),(iv)
D. (i),(ii),(iv)

## Answer: D

## - Watch Video Solution

108. Select the wrong match
A. Ring of trachea - Hyaline cartilage and bronchi
B. Nasal septum - White fibrous
C. Public symphysis - White fibrous cartilage
D. Eustachian tube - Elastic cartilage

## Answer: B

109. Read the following statements
(i) In adults most of the RBCs are produced in the marrow of long bones.
(ii) In camel and Llama RBCs are oval.
(iii) Foetal RBCs are nucleated and contain a different form of haemoglobin as compared the adults.
(iv) Lymphocytes are 6-70\% of the total leucocytic count Select the correct statements
A. (i),(ii),(iii)
B. (i) and (ii)
C. (ii) and (iii)
D. (ii),(iii) and (iv)

## Answer: C

## - Watch Video Solution

110. Go through the following statements

During muscle contraction, the width of A-band remains constant while Iband shortens.

During muscle contraction, the $\mathrm{Ca}^{2+}$ released from the SR bind to the troponin component of thin filament

The process of muscle contraction is faster in smooth muscle as they have a well developed sarcoplasmic reticulum.

The red muscle fibres have abundant mitochondria, low glycogen and poorly formed sarcoplasmic reticulum.
A. (i),(ii), and (iii)
B. (i),(ii) and (iv)
C. (i),(iii) and (iv)
D. All are correct

## Answer: B

## D Watch Video Solution

111. Go through the following matches
(i) Gluteal tuberosity - Tibia
(ii)Medial malleolus - Fibula
(iii) Greater Trochanter - Femur

Which of these are correct?
A. (i) only
B. (iii) only
C. (i) and (ii)
D. (ii) and (iii)

## Answer: B

## - Watch Video Solution

112. Go through the following matches
(i) Pisiform - Bone in distal row to wrist
(ii) Lateral and - Femur medial condyles
(iii) Ethmoid - Pneumatic bone

Which of these are correct ?
A. (i) and (ii)
B. (ii) and (iii)
C. only (iii)
D. All are correct

## Answer: B

## - Watch Video Solution

113. Go through the following statement
(i) Thoracic vertebrae have got foramina transversaia in their transverse processes.
(ii) Atlas permits up and down or nodding movement of skull on it.
(iii) The body of human vertebra is amphip latyan in nature.
(iv) Without exception, all mammals have seven cervical vertrae Which of these are correct?
A. (i),(ii), and (iii)
B. (ii) and (iii)
C. (ii),(iii),(iv)
D. (i),(iii),\& (iv)

## Answer: B

## - Watch Video Solution

114. Go through the following matches
(i) wrist joint - anuglar joint
(ii) Interphalangeal joint - Angular joint
(iii) Metacarpophalangeal - Hinge joint
(iv) Carpal bones - Gliding joint

Which of these are correct?
A. (i),(ii) and (iii)
B. (ii), (iii) and (iv)
C. (i) and (iv)
D. (i), (iii) and (iv)

## Answer: C

## - Watch Video Solution

115. Select the wrong match
A. Epiphyseal plate - Hyaline fibrous cartilage
B. Intervertebral disc - White fibrous cartiage
C. Pinna - Elastic cartilage
D. Xiphisternum - Elastic cartilage

## Answer: D

## - Watch Video Solution

116. Read the following statements
(i) first seven pairs of ribs are called true ribs or vertebrochondral ribs.
(ii) A rib has two articulation surfaces on its dorsal end and is hence called bicephalic.
(iii) Pelvic girdle consists of two coxal bones
(iv) Xiphoid process forms the lowermost and manubrium forms the uppermost part of the sternum.

Which of these are correct?
A. (i),(ii) and (iii)
B. (ii),(iii) \& (iv)
C. (i),(iii) and (iv)
D. All are correct

## Answer: B

## - Watch Video Solution

117. Go through the following matches
(i) Gluteus maximus - Chief extensor of knee
(ii) Hamstrings - Flexor of knee
(iii) Serratus anterior - Boxer's muscle
(iv) Deltoid - Flexor's shoulder joint

## Which of these are correct?

A. (i) and (iii)
B. (ii) and (iii)
C. (i),(iii) and (iv)
D. (ii),(iii) (iv)

## Answer: B

## D Watch Video Solution

118. Given below are the following statements regarding actin
(i) Is the main constituent of light band
(ii) Forms the Anisotropic band on its own
(iii) Are te thicker filaments

Are a part of the H zone.

Choose the correct option
A. (i),(ii) and (iii) are true
B. (i) and (iii) are true
C. (ii),(iii) and (iv) are false
D. All are false

## Answer: C

## - Watch Video Solution

119. Read the following statements regarding muscle contraction
(i) One ATP utillised for making and breaking of the cross bridge.
(ii) The sarcomere lies between 2 Z-lines
(iii) Troponin blocks the active sites in resting stage
(iv) $\mathrm{Ca}{ }^{++}$ions help in unmasking active sites on HMM

## Choose the correct option

A. Only (i) is false
B. Only (ii) and (iii) are ture
C. Only (iv) is false
D. Only (ii) is false

## Answer: B

## - Watch Video Solution

120. Match list-I and list-II, select the correct answer using the codes given below the lists.

List-I (Constractile proteins) List-II (Functions)
A. Mysoin
B. Actin
C. Troponin
D. Tropomyosin

1. Stabilizes F-actin
2. Calcium binding
3. Sliding
4. ATPase activity
A. $3,4,1,2$
B. 4, 3, 2 , 1
C. $4,3,1,2$
D. 3, 4, 2, 1

## Answer: B

## - Watch Video Solution

121. Which of the following statements is consistent with smooth muscle architecture?
A. The presence of deep, invaginating. T-tubules
B. Actin and myosin orgainzed into visible striations
C. Multicellular units of muscle tissue that function voluntarily
D. Multiunit muscle cells that are active during Gl peristalsis

## Answer: D

122. Red muscle fibres are heavily dependent on which of the following in order to function properly?
(i) Oxygen concentration
(ii) ATP levels
(iii) Intracellular glucose storage
A. I and II only
B. II and III only
C. III only
D. I, II and III

## Answer: A

## - Watch Video Solution

123. Go through the following statements
(i) Sigmoid notch is present between condyloid process and coronoid
process of mandible
(ii) The thoracic vertebrae are the strongest and the largest of all the vertebrae
(iii) The atlas permits up and down or noding movement of skull on it.
(iv) The body of atlas bears an odontoid process.

Which of these are correct?
A. (i),(ii) \& (iii)
B. (i),(iii) \& (iv)
C. (i) and (iii)
D. (iii) and (iv)

## Answer: C

## - Watch Video Solution

124. Read the following matches carefully
(i) Greater sciatic notch - Innominate bone
(ii) Obturator foramen - Innominate bone
(iii) Acromion process - Humerus

Which of these are correct?
A. (i) and (ii)
B. (ii) and (iii)
C. (i) and (iii)
D. All are correct

## Answer: A

## - Watch Video Solution

125. Read the following matches carefully
(i) Olecranon fossa - Ulna
(ii) Greater turberosity - Humerus
(iii) Foramen magnum - Skull

Which of these are correct?
A. (i) and (ii)
B. (ii) and (iii)
C. (i) and (iii)
D. All are correct

## Answer: B

## - Watch Video Solution

126. Go through the following matches
(i) Acetabulum - Hip bone
(ii) Ischial tubersoity - Hip bone
(iii) Maxila - Check bone

Which of these are correct?
A. (i) and (ii)
B. (ii) and (iii)
C. (i) and (iii)
D. All are correct

## D Watch Video Solution

127. Go through the following matches
(i) Trochlear notch - Ulna
(ii) Capitulum - Radius
(iii) Symphysis pubis - Hip bone

Which of the these are correct?
A. (i) and (ii)
B. (i) and (iii)
C. (ii) and (iii)
D. All are correct

## Answer: B

128. Go through the following matches
(i) Calcaneum - Largest bone of the foot
(ii) Intervertebral - Cartilaginous joint discs
(iii) Lateral malleolus - Femur

Which of these are correct?
A. (i) and (ii)
B. (ii) and (iii)
C. (i) and (iii)
D. All are correct

## Answer: A

## - Watch Video Solution

129. Go through the following matches
(i) Pisiform - Sesamoid bone
(ii) Symphysis pubis - Cartilaginous joint
(iii) Cuboid - Tarsal bone

Which of these are correct?
A. (i) and (ii)
B. (ii) and (iii)
C. (i) and (iii)
D. All are correct

## Answer: D

## ( Watch Video Solution

130. Go through the following matchs
(i) Atlanto occipital joint - Angular joint
(ii) Incus and stapes - Ball and socket
(iii) Talus - Bone of distal row of wrist

Which of these are correct?
A. (i) and (ii)
B. (ii) and (iii)
C. (ii) only
D. (i) only

## Answer: A

## - Watch Video Solution

131. The myosin myofilament can be cleaved into a head and a tail piece.

All of the following are accurate in describing the position of myosin in a sacromere except
(i) A-band is the length of a myosin myoilaments
(ii) A-band contains thin and thick myofilaments
(iii) A-band does not include actin-binding sites
A. I and II only
B. II and III only
C. III only

## D. I, II and III

## Answer: C

## - Watch Video Solution

132. Read the following matches
(i) Glenoid cavity - Scapula
(ii) Bicipital tuberosity - humerus
(iii) Styloid Process - Ulna

Which of these are correct?
A. (i) and (ii)
B. (i) \& (iii)
C. (ii) and (iii)
D. All are correct

## Answer: B

133. Match the following and mark the correct option
Column I
Column II

Fast muscle fibres i. Myoglobin
Slow muscle fibres ii. Lactic acid
Actin filament iii. Contractile unit
Sarcomere iv. I-band
A. A-(i),B-(ii),C-(iv),D-(iii)
B. A-(ii),B-(i),C-(iii),D-(iv)
C. A-(ii),B-(i),C-(iv),D-(iii)
D. $A$-(iii),B-(ii),C-(iv),D-(i)

## Answer: C

## - Watch Video Solution

134. Which one of the following is showing the correct sequential order of vertebrae in the vertebral column of human beings ?
A. Cervical-lumbar-thoracic-lumber-occygeal
B. Cervical-thoracic-sacral-lumbar-occygeal
C. Cervial-sacral-thoracic-lumbar-coccygeal
D. Cervical-thoracic-lumar-sacral-cocygeal

## Answer: D

## - Watch Video Solution

135. Which one of the following option is incorrect ?
A. Hingejoint - between Humerus and pectroal girdle
B. Pivot joint - betwwen atlas and axis
C. Gliding joint - between the carpals
D. Saddle joint - between carpal and metacarpals or thumb

## Answer: A

136. Which one of the following statements is incorrect?
A. Heart muscles are striated and involuntary
B. The muscles of hands and legs are striated and voluntary
C. The muscles located in the inner walls of alimentary canal are striated and involuntary
D. Muscles located in the reproductive tracts are unstriated and involuntary

## Answer: C

## - Watch Video Solution

137. Which one of the following statements is true
A. Head of humerus bone articulates with acetabulum of pectoral girdle.
B. Head of humerus bone articulates with glenoid cavity of pectoral girdle.
C. Head of humerus bone articulates with a cavity called acetabulum of pelvic girdle.
D. Head of humerus bone articulates with a glenoid cavity of pelvic girdle.

## Answer: B

## - Watch Video Solution

138. Muscles with characteristic striations and involuntary are
A. Muscle in the wall of alimentary canal
B. Muscles of the heart
C. Muscles assisting locomotion
D. Muscles of the eyeilds

## Answer: B

## D Watch Video Solution

139. Match the followings and mark the correct option
Column I
Column II
Sternum
i. Synovial fluid
Glenoid Cavity
ii. Vertebrae
Freely movable joint iii. Pectoral girdle
Cartilagenous joint $i v$. Flat bones
A. A-(ii),B-(i),C-(iii),D-(iv)
B. A-(iv),B-(iii),C-(i),D-(ii)
C. A-(ii),B-(i),C-(iv),D-(iii)
D. $A$-(iv), B-(i), C-(ii), D-(iv)

## Answer: B

140. Which one of the following is a sesamoid bone
A. Pelvis
B. patella
C. pterygoid
D. Pectoral girdle

## Answer: B

## - Watch Video Solution

141. Given below is a diagram of the bones of the left human limb as seen from front. It has certain mistakes in labelling.

Two of the wrongly labelled bones are
A. Tibia and tarsals
B. Femur and fibula
C. Fibula and phalangers
D. Tarsals and femur

## Answer: C

## - Watch Video Solution

142. Assertion. Inflammation of a skeletal joint may immobilize the movements of the joint.

Reason. Uric acid crystals in the joint cavity and ossification of articular cartilage lead to this.
A. If both Assertion and Reason are true and the Reason is correct explanation of the Assertion, then mark a.
B. If both Assertion and Reason are true but the Reason is not the correct explantation of the Assertion, then mark b.
C. If Assertion is true statement but reason is false, then mark c.
D. If both Assertion and Reason are false statements then mark d.

## Answer: A

## - Watch Video Solution

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

## Answer: D

## - Watch Video Solution

144. Find out the correct match regarding the structure of muscle fibre

## Band Colour Filaments

A. A - band Dark Contains only actin
B. I-band Light Contains only actin
C. A-band Light Contains actin and myosin both
D. I-band Light Contains myosin only

## Answer: B

## - Watch Video Solution

145. ATPase enzyme needed for muscle contraction is located in
" " Or

The contractile protein of skeletal muscle involving ATPase activity is
A. myosin
B. actin
C. actinin
D. troponin

## Answer: A

## D Watch Video Solution

146. An acromian process is characteristically found in the
A. Skull of frog
B. sperm of mammals
C. pelvic girdle of mammals
D. pectoral girdle of mammals

## Answer: D

## - Watch Video Solution

147. Which of the following pairs is correctly matched ?
A. Fibrous joint - between phalanges
B. Cartilaginous joint -skull bones
C. Gliding joint - between zygapophyses of the successive vertebrae
D. Hinge joint - between vertebrae

## Answer: C

## - Watch Video Solution

148. In human body, which one of the following is anatomically correct ?
A. Collar bones - 3 pairs
B. Salivary glands - 1 pairs
C. Cranial nerves - 10 pairs
D. Floating ribs - 2 pairs

## Answer: D

## - Watch Video Solution

149. Which one of the following items gives its correct total number
A. Cervical vertebrae in human - 8
B. Floating ribs in human - 4
C. Amino acids found in proteins -16
D. Types of diabetes - 3

## Answer: B

## - Watch Video Solution

150. Which one of the following is correct pairing of a body part and the kind of muscle tissue that moves it
A. Abdominal wall Smooth muslce
B. Iris Involunatary smooth muscle
C. Heart wall Involunatary unstriated mucscle
D. Biceps of upper arm Smooth muscle fibres

## Answer: B

## - Watch Video Solution

151. Elbow joint is an example of
A. gliding joint
B. ball and socket joint
C. Pivot joint
D. Hinge joint

## Answer: D

152. Which one of the is the correct matching of three items and their grouping category?
A. Actin, myosin, rhodopsin - Muscle
B. Cytosine, uracil, thiamine - Pyrimidines
C. Malleus, incus, cochlea - Ear ossicles
D. Iilium, ischium, pubis - Coxal boneso pelvic girlde

## Answer: D

## - Watch Video Solution

153. Select the correct statement regarding the specific disorder of musclular or skeletal system.
A. Osteoporosis - decrease in bone mass and higher chances of fractures with advancing age
B. Myasthenia gravis - Auto immune disorder which inhibits sliding of
myosin filaments
C. Gout - inflammation of joints due to extra deposition of calcium
D. Muscular dystrophy - age related shortening of muscles

## Answer: A

## - Watch Video Solution

154. Which one of the following pairs of structures is correctly matched with their correct description
A. Tibia and fibula - Both form parts knee joint
B. Cartilage and cornea - NO blood supply but do require oxygen for
respiratory need
C. Shoulder joint and elbow joint - Ball and socket type of joint
D. Premolar and molars - 20 in all and 3 rooted

## Answer: B

## - Watch Video Solution

155. Which one of the following is correct description of a certain part of a normal human skeleton?
A. Parietal bone and the temporal bone of the skull are joined by fibrous joint
B. First vertebra is axis which articulates with the occipital condyles
C. The 9th and 10th pairs of ribs are called the floating ribs
D. Glenoid cavity is a depression to which the thigh bone articulates

## Answer: A

## D Watch Video Solution

156. The types of muscles present in our :
A. Heart are involuntary and unstriated smooth muscles
B. Intestine are striated and involuntary
C. Thigh are striated and voluntary
D. Upper arm are smooth muscle fibres fusiform in shape

## Answer: C

## - Watch Video Solution

157. 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
A. Sternum and Ribs Axial skeletal
B. Clavicle \& Glenoid cavity Pelvic girdle
C. Humerus and ulna Appendicular skeleton
D. Malleus and stapes Ear ossicles

## Answer: B

## - Watch Video Solution

158. Which one of the following pairs of chemical substance, is correctly categorized?
A. Troponin and myosin - Complex proteins in striated muscles
B. Secretin and rhodopsin - Polypeptide hormones
C. Calcitonin and thymosin - Thyroid hormones
D. Pepsin and prolactin - Two digestive enzymes secreted in stomach

## Answer: A

## - Watch Video Solution

159. Acetabulum is associated with
A. Pelvic girdle
B. pectoral girdle
C. olfactory lobe
D. rib cage

## Answer: A

## D Watch Video Solution

160. Function of T-tubules in muscles is to
A. secrete acetylcholine
B. conduct impulses
C. support and muscle fibres
D. store calcium

## Answer: B

161. The wall of the internal organs such as blood vessels, stomach and intestine contains which type of muscle tissue?
A. smooth muscle fibre
B. cardiac muscle fibre
C. skeletal muscle fibre
D. Neural tissue

## Answer: A

## - Watch Video Solution

162. Inflammation of joints due to accumulation of uric acid crystals is called as
A. gout
B. Rheumatoid Arthirtis
C. Osteoarthritis
D. Rickets

## Answer: A

## D Watch Video Solution

163. Which type of joint has a fluid filled cavity for significant role in locomotion?
A. Fibrous joints
B. Cartilagenous joints
C. Synovial joints
D. All the above

## Answer: C

164. Joint between the carpals is called
A. Saddle joint
B. gliding joint
C. ball and socket joint
D. Hinge joint

## Answer: B

## Watch Video Solution

165. Major protein in thick filaments of skeletal muscle fibre is
A. Myosin
B. Actin
C. tropomyosin
D. Troponin

## D Watch Video Solution

166. The number of cervial vertebrae in mammals including human beings are
A. 9
B. 8
C. 7
D. 10

## Answer: C

## D Watch Video Solution

167. In resting stage, binding sites for myosin on actin filaments are masked by
A. Troponin
B. Light meromyosin
C. Heavy meromyosin
D. Calcium ions

## Answer: A

## D Watch Video Solution

168. How many lumber present in vertebral column of human?
A. 26
B. 7
C. 12
D. 5

## Answer: D

169. ATPase activity in muscle fibre lies with
A. light meromyosin
B. troponin
C. head of heavy meromyosin
D. short arm of heavy meromyosin

## Answer: C

## - Watch Video Solution

170. The example of pivot joint is
A. hip joints
B. metacarpophalangeal joints
C. ankle joints
D. radioulnar joints

## Answer: D

## - Watch Video Solution

171. The major function of the intervertebral discs is to
A. absorb shock
B. string the vertebrae together
C. prevent injuries
D. prevent hyperextension

## Answer: A

## ( Watch Video Solution

172. Clavicle articulates with . . . . . . . Of scapula
A. acromion process
B. glenoid process
C. acetabulum cavity
D. ball and socket joint

## Answer: A

## D Watch Video Solution

173. The function of $N a^{+}$and $k^{+}$pump is to
A. $N a^{+}$out and $C l^{-}$in
B. $\mathrm{Cl}^{-}$out and $\mathrm{Na}^{+}$in
C. $N a^{+}$in and $k^{+}$out
D. $N a^{+}$out and $K^{+}$in

## Answer: D

174. Energy is stored in the liver and muscles in the form of

## Or

In the muscles carbohydrates are stored in the form of
A. carbohydrate
B. Fat
C. protein
D. glycogen

## Answer: D

## D Watch Video Solution

175. Which is common to kidney and skeleton in mammals
A. cortex
B. pelvis
C. medulla
D. radius

## Answer: B

## - Watch Video Solution

176. Axis vertebra is identified by
A. signoid notch
B. odontoid process
C. deltoid
D. centrum

## Answer: B

## - Watch Video Solution

177. Progressive degeneration of skeletal muscle, mostly due to genetic disorder occurs in
A. Myasthenia gravis
B. muscular dystrophy
C. tetany
D. arthrits

## Answer: B

## - Watch Video Solution

178. In human beings cranium is formed by
A. eight bones by 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

## D Watch Video Solution

179. The matrix of bone and cartilage can be distinguished by the presence of
A. Haversian canal
B. lacuna
C. chromatophores
D. adipose cells

## Answer: A

## - Watch Video Solution

180. The type of muscle present in the alimentary canal is
A. smooth muscle fibre
B. striped muscle fibre
C. cardiac muscle fibre
D. both (1) and (2)

## Answer: D

## D Watch Video Solution

181. Which one has oxygen storing capacity
A. myoglobin
B. actin
C. myosin
D. fibrin

## Answer: A

182. Osteomalacia is a deficiency disease of
A. infants due to protein energy malnutrition
B. adults due to protein energy malnutrition
C. adults due to vitamin D deficiency
D. infants due to vitamin $K$ deficiency

## Answer: C

## - Watch Video Solution

183. The ball and socket joint is found in
A. skull
B. shoulder
C. knee
D. atlas and axis

## Answer: B

## - Watch Video Solution

184. Select the correct statement with respect to locomotion in humans
A. The vertebral column has 10 thoracic vertebrae
B. The joint between adjacent vertebrae is a fibrous joint
C. A decreased level of progesterone causes osteoporosis in old people
D. Accumulation of uric acid crystals in joints causes their inflammation.

## Answer: D

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

## Answer: A

## - Watch Video Solution

186. 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

Example
Gliding joint
Knee joint Skull bones
Joint betwee
A. fluid filled synovial cavity between two bones joint between atlas and axis
B. lymph filled between two bones, limited movement gliding joint between carpals
C. fluid, cartilage between two bones, limited knee joint
D. fluid filled between two joint, provides cushion skull bones

## Answer: A

## - Watch Video Solution

187. Select the correct matching of the type of the joint with the example in human skeletal system
A. Gliding joint - Between carpals
B. Cartilaginous joint - Between frontal and parietal
C. Pivot joint - between third and fourth cervical vertebrae
D. Hinge joint - between Humerus and pectroal girdle

## Answer: A

## - Watch Video Solution

188. Stimulation of muscle fibre by a motor neuron occurs at
A. The sacroplasmic reticulum
B. The neuromuscular junction
C. The transverse tubules
D. The myofibril

## Answer: B

## - Watch Video Solution

189. Sliding filament theory can be best explained as
A. Actin and Myosin filaments shorten and slide pass each other
B. Actin and Myosin filaments do not shorten but rather slide pass each other
C. When myofilaments slide pass each other, myosin filaments shorten
while Actin filaments do not shorten
D. When myofilaments slide pass each other actin filament do not shorten

## Answer: B

## - Watch Video Solution

190. Glenoid cavity articulates
A. scapula with acromion
B. clavicle with scapula
C. humerus with scapula
D. clavicle with acromion

## Answer: C

## - Watch Video Solution

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

## Answer: A

## - Watch Video Solution

192. Which of the following is not a function of the skeletal system
A. Production of erythrocytes
B. Storage of minerals
C. Production of body heat
D. Locomotion

## Answer: C

## - Watch Video Solution

193. Lack of relaxation between successive stimuli in striated muscle contraction is known as
A. Fatigue
B. Tetanus
C. Tonus
D. Spasm

## Answer: B

194. Smooth muscles are
A. involuntary, fusiform, non-striated
B. voluntary, multinucleate, cylindrical
C. involuntary, cylindrical, striated
D. voluntary, spindle-shaped,uniuncleate

## Answer: A

## - Watch Video Solution

195. Name the ion responsible for masking active sites for myosin for cross-bridge activity during muscle contraction
A. calicum
B. Magnesium
C. Sodium
D. Potassium

## Answer: A

## D Watch Video Solution

196. Osteoporosis, an age related disease of skeletal system, may occue due to
A. immune disorder affecting neuromouscular junction leading to fatigue.
B. high concetration of $\mathrm{Ca}^{++}$and $\mathrm{Na}^{+}$
C. decreased level of estrogen
D. accumulation of uric acid leading to inflammation of joints

## Answer: C

197. Out of 'X' pairs of ribs in humans only 'Y' pairs are true ribs. Select the option that correctly represents values of X and Y and provides their explanation
A. $X=12, Y=7$ Ture ribs are attached dorsally to vertebral column and ventrally to the sternum.
B. $X=12, Y=5$ True ribs are attached dorsally to vertebral column and sternum on the two ends.
C. $\mathrm{X}-24, \mathrm{Y}=7$ Ture ribs are dorsally attached to vertebral column but are free on ventral side.
D. $\mathrm{X}=24, \mathrm{Y}=2$ True ribs are dorsally attached to vertebral column but are free on ventral side

## Answer: A

198. The pivot joint between atlas and axis is a type of
A. fibrous joint
B. cartilaginous joint
C. synovial joint
D. saddle joint

## Answer: C

## - Watch Video Solution

199. Calcium is important in skeletal muscle contraction because it
A. prevents the formation of bonds between the myosin cross bridges
and the actin filaments
B. Detaches the myosin head from the actin filament
C. activates the myosin ATPase by binding to it.
D. binds to troponin to remove the masking of active sites on actin for myosin

Answer: D

- Watch Video Solution

