



BIOLOGY

BOOKS - NEET PREVIOUS YEAR (YEARWISE + CHAPTERWISE)

LOCOMOTION AND MOVEMENT

Exercises

1. 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 True ribs are attached dorsally to vertebral column and ventrally on the sternum.

B. $X=12$, $Y=5$ True ribs are attached dorsally to vertebral column and sternum on the two ends.

C. $X=24$, $Y=7$ True ribs are dorsally attached to vertebral column but are free on ventral side.

D. $X=24$, $Y=12$ True ribs are dorsally attached to vertebral column, but are free on ventral side.

Answer: A



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2. The pivot joint between atlas and axis is a type of

A. fibrous joint

B. cartilaginous joint

C. synovial joint

D. saddle joint

Answer: C



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3. Lack of relaxation between successive stimuli in striated muscle contraction is known as

A. fatigue

B. tetanus

C. tonus

D. spasm

Answer: B



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

A. Calcium

B. Magnesium

C. Sodium

D. Potassium

Answer: A



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5. Osteoporosis, an age related disease of skeletal system, may occur due to

A. immune disorder affecting neuromuscular junction leading to fatigue

B. high concentration of Ca^{++} and Na^{+}

C. decreased level of oestrogen

D. accumulation of uric acid leading to inflammation of joints

Answer: C



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6. Smooth muscles are

- A. involuntary, fusiform, non-striated
- B. voluntary multinucleate, cylindrical
- C. involuntary, cylindrical, striated
- D. voluntary, spindle-shaped, uninucleate

Answer: A



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7. 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



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8. 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



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

- | | Types of Joint | Example |
|----|---------------------|---|
| A. | Cartilaginous joint | Between frontal and |
| | Types of Joint | Example |
| B. | Pivot joint | Between third and fourth cervical vertebrae |
| | Types of Joint | Example |
| C. | Hinge joint | Between humerus and pectoral girdle |
| | Types of Joint | Example |
| D. | Gliding joint | Between carpals |

Answer: D



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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



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

Characterstics	Example
(a) Lymph filled between two bones, limited movement	Gliding joint
(b) Fluid cartilage between two bones, limited movements	Knee joint
(c) Fluid filled between two joints, provides cushion	Skull bones
(d) Fluid filled synovial cavity between two bones	Joint between

A.

Characteristics	Examples
Fluid cartilage between two bones, limited movements	Knee joints

Characteristics	Examples
B. Fluid filled between two joints, provides cushion	Shull bones

C.

Characteristics	Examples
Fluid filled synovial cavity between two bones	Joint between atlas a

D.

Characteristics	Examples
Lymph filled between two bones, limited movement	Gliding joint be

Answer: C



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12. Select the correct statement with respect to locomotion in humans

- A. A decreased level of progesterone causes osteoporosis in old people
- B. Accumulation of uric acid crystals in joints causes their inflammation
- C. The vertebral column has 10 thoracic vertebrae
- D. The joint between adjacent vertebrae is a fibrous joint

Answer: B



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13. Select the correct statement regarding the specific disorder of muscular or skeletal system.

- A. Muscular dystrophy-Age related shortening of muscles
- B. Osteoporosis-Decrease in bone mass and higher chances of fractures with advancing age
- C. Myasthenia gravis-Autoimmune disorder which inhibits sliding of myosin filaments
- D. Gout-Inflammation of joint due to extra deposition of calcium,

Answer: B



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14. Elbow joint is an example of

- A. pivot joint
- B. hinge joint
- C. gliding joint
- D. ball and socket joint

Answer: B



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15. Which one of the following is correct pairing of a body part with the kind of muscle tissue present in it ?

- A. Heart wall → Involuntary unstriated
- B. Biceps of upper arm → Smooth muscle fibres
- C. Abdominal wall → Smooth muscle
- D. Iris → involuntary smooth muscle

Answer: D



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16. ATPase enzyme needed for muscle contraction is located in

" " Or

The contractile protein of skeletal muscle involving ATPase activity is

- A. myosin
- B. a-actinin
- C. troponin
- D. tropomyosin

Answer: A



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17. Which of the following pairs, is correctly matched?

- A. Hinge joint → Between vertebrae
- B. Gliding → Between zygapophyses of the successive vertebrae
- C. Cartilaginous → Skull bones
- D. Fibrous joint → Between phalanges

Answer: B



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18. Acromion process is characteristacally found in the_____of mammals.

- A. pelvic girdle of mammals
- B. pectoral girdle of mammals
- C. skull of frog
- D. sperm of mammals

Answer: B



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19. ATPase enzyme needed for muscle contraction is located in

" " Or

The contractile protein of skeletal muscle involving ATPase activity is

- A. actinin
- B. troponin
- C. myosin
- D. actin

Answer: C



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20. What will happen if ligments are cut or broken?

- A. Bones will move freely at joints
- B. No movement at joint
- C. Bone will become unfix
- D. Bone will become fixed

Answer: C



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21. Which statement is correct for muscle contraction?

- A. Length of H-zone decrease
- B. Length of A-band remains constant
- C. Length of I-band increases
- D. Length of two Z-line increases

Answer: B



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22. What is statement?

- A. Part between two H-lines
- B. Part between two A-lines
- C. Part between two I-bonds

D. Part between two Z-lines

Answer: D



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23. A skull bone is

A. Atlas

B. Coracoid

C. Arytenoid

D. Pterygoid

Answer: D



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24. What is the name of joint between ribs and sternum ?

- A. angular joint
- B. fibrous joint
- C. cartilaginous joint
- D. gliding joint

Answer: C



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25. Ligament is

- A. modified yellow elastic fibrous tissue
- B. inelastic white fibrous tissue
- C. modified white fibrous tissue
- D. None of the above

Answer: B



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26. Tendon is made up of

- A. adipose tissue
- B. modified white fibrous tissue
- C. areolar tissue
- D. yellow fibrous connective tissue

Answer: B



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27. Total number of bones in the hindlimb of a man is

- A. 14
- B. 30
- C. 24

D. 21

Answer: B



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28. Which of the following is the contractile protein of a muscle?

A. myosin

B. Tropomyosin

C. Actin

D. Tubulin

Answer: A



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29. The lower jaw in mammals is made up of

A. mandible

B. dentary

C. maxilla

D. angulars

Answer: B



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30. The number of floating ribs in human body is

A. 6 pairs

B. 5 pairs

C. 3 pairs

D. 2 pairs

Answer: D



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31. Which ion is essential for muscle contraction ?

A. Na

B. K

C. Ca

D. Cl

Answer: C



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32. Which is part of pectoral girdle ?

A. Glenoid cavity

B. Sternum

C. Ileum

D. Acetabulum

Answer: A



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33. Long bones function in

- A. support
- B. support erythrocyte and leucocyte synthesis
- C. support, and erythrocyte synthesis
- D. erythrocyte formation

Answer: B



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34. A deltoid ridge occurs in

- A. radius
- B. ulna
- C. femur
- D. humerus

Answer: D



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35. Number of cervical vertebrae in camel is

- A. more than that of rabbit
- B. less than that of rabbit
- C. same as that of whale
- D. more than that of horse

Answer: C



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36. Extermities of long bones possess cartilage

- A. calcified
- B. fibrous
- C. elastic
- D. hyaline

Answer: D



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37. Inercostal muscles occur in

- A. abdomen
- B. thigh
- C. ribs

D. diaphragm

Answer: C



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