

Section A

● Write the answer of the following questions. [Each carries 1 Mark]

[20]

1. Match the following columns.

Column - I	Column - II
(a) Fast muscle fibres	(i) Myoglobin
(b) Slow muscle fibres	(ii) Lactic acid
(c) Actin filament	(iii) Contractile unit
(d) 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)

2. Which one of the following is showing the correct sequential order of vertebrae in the vertebrae column of human beings ?

(A) Cervical – lumbar – thoracic – sacral – coccygeal

(B) Cervical – thoracic – sacral – lumbar – coccygeal

(C) Cervical – sacral – thoracic – lumbar – coccygeal

(D) Cervical – thoracic – lumbar – sacral – coccygeal

3. Which one of the following options is incorrect ?

(A) Hinge joint – between Humerus and Pectoral girdle

(B) Pivot joint – between atlas, axis and occipital condyle

(C) Gliding joint – between the carpals

(D) Saddle joint – between carpal and metacarpals of thumb

4. Match the following columns.

Column - I	Column - II
(a) Sternum	(i) Synovial fluid
(b) Glenoid Cavity	(ii) Vertebrae
(c) Freely movable joint	(iii) Pectoral girdle
(d) Cartilagenous joint	(iv) 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 - iii)

5. Which one of the following statement 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

6. Macrophages and leucocytes exhibit

(A) Ciliary movement

(B) Flagellar movement

(C) Amoeboid movement

(D) Gliding movement

7. Which one of the following is not a disorder of bone ?

(A) Arthritis

(B) Osteoporosis

(C) Rickets

(D) Atherosclerosis

8. Which line is present in centre of 'H' zone ?
(A) Z-line (B) M-line (C) Krause membrane (D) Henson's line
9. Vertebral formula of man is
(A) C₇, T₂, L₅, S₅, C₄ (B) C₁₂, T₇, L₅, S₅, C₄ (C) C₇, T₁₂, L₅, S₁, C₁ (D) C₇, T₁₂, L₅, S₄, C₅
10. A : Osteoarthritis is more common in old people.
R : Secretion of synovial fluid decreases with age.
(A) A and R both are correct and R is correct explanation of A.
(B) A and R are correct but R is not explanation of A.
(C) A is correct and R is false.
(D) A and R are false
11. A : Female Pelvis is larger and has wider bottom opening.
R : Female has more subcutaneous fats.
(A) A and R both are correct and R is correct explanation of A.
(B) A and R are correct but R is not explanation of A.
(C) A is correct and R is false.
(D) A and R are false
12. Which of the following statements wrongly represents the nature of smooth muscle ?
(A) Communication among the cells is performed by intercalated discs.
(B) These muscles are present in the wall of blood vessels.
(C) These muscle have no striations.
(D) They are involuntary muscles.
13. Which of the following is a correct match for disease and its symptoms ?
(A) Myasthenia gravis – Genetic disorder resulting in weakening and paralysis of skeletal muscle
(B) Muscular dystrophy – An auto immune disorder causing progressive degeneration of skeletal muscle
(C) Arthritis – Inflamed joints
(D) Tetany – High Ca²⁺ level causing rapid spasms.
14. Given below are two statements : one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : Osteoporosis is characterised by decreased bone mass and increased chance of fractures.
Reason (R) : Common cause of osteoporosis is increased levels of estrogen.
In the light of the above statements, choose the most appropriate answer from the options given below.
(A) (A) is correct but (R) is not correct
(B) (A) is not correct but (R) is correct
(C) Both (A) and (R) are correct and (R) is the correct explanation of (A)
(D) Both (A) and (R) are correct but (R) is not the correct explanation of (A)
15. Match List I with List II.

List I (Type of Joint)	List II (Found between)
(a) Cartilaginous Joint	(i) Between flat skull bones
(b) Ball and Socket Joint	(ii) Between adjacent vertebrae in vertebral column
(c) Fibrous Joint	(iii) Between carpal and metacarpal of thumb
(d) Saddle Joint	(iv) Between Humerus and Pectoral girdle

Choose the correct answer from the options given below :

- (A) (a - II), (b - IV), (c - III), (d - I) (B) (a - III), (b - I), (c - II), (d - IV)
(C) (a - II), (b - IV), (c - I), (d - III) (D) (a - I), (b - IV), (c - III), (d - II)

16. Chronic auto immune disorder affecting neuro muscular junction leading to fatigue, weakening and paralysis of skeletal muscle is called as :

- (A) Myasthenia gravis (B) Gout
(C) Arthritis (D) Muscular dystrophy

17. Match the following columns and select the correct option.

Column-I	Column-II
(a) Floating ribs	(i) Located between second and seventh ribs
(b) Acromion	(ii) Head of the humerus
(c) Scapula	(iii) Clavicle
(d) Glenoid cavity	(iv) Do not connect with the sternum

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

18. A : Arthritis or inflammation of a joint makes joint painful.

R : Some toxic substances are deposited at the joint.

- (A) A and R both are correct and R is correct explanation of A.
(B) A and R are correct but R is not explanation of A.
(C) A is correct and R is false.
(D) A and R are false

19. Which of the following muscular disorders is inherited ?

- (A) Botulism (B) Tetany (C) Muscular dystrophy (D) Myasthenia gravis

20. What is the appearance of muscle rich in myoglobin ?

- (A) Red (B) White (C) Yellow (D) Blue