

Topic :- Locomotion & Movement

- 1 (c)
Haversian canals are characteristic feature of long bone of mammals. The Haversian canals are interconnected by Volkmann's canals to form **Haversian system**. Its main function is transportation of nutrients and O₂ through blood.
- 2 (d)
Methods of locomotion performed by animals vary with their habitats and the demand of the situations. However, locomotion is generally performed for the search of food, shelter, mate, suitable breeding grounds, favourable climate condition or to escape from enemies/predators
- 4 (c)
Actin and myosin polymerise to form myofibrils. Several myofibrils forms muscle fibre and several muscle fibres form muscle fasciculus
- 5 (c)
Temporal bone are two in number
- 6 (a)
Chondroitin salt.
Bone and cartilage are specialized connective tissues. The former has a very hard matrix due to calcium salts in it and the later has slightly pliable matrix due to chondroitin salts
- 7 (c)
True ribs are the ribs, which connects dorsally to vertebrae column and ventrally to the sternum. First seven pairs of ribs are the true ribs
- 8 (b)
Parallely arranged filament of muscle fibre.
Each muscle fibre is lined by the plasma membrane called sarcolemma enclosing the sarcoplasm. Muscle fibre is a syncytium as the sarcoplasm contains many nuclei. The endoplasmic reticulum, *i.e.*, sarcoplasmic reticulum of the muscle fibres is the store house of calcium ions. A characteristic feature of muscle fibre is the presence of large number of parallely arranged filaments in the sarcoplasm called myofilaments or myofibrils
- 10 (c)
A-Ciliated B-Trachea, C-Amoeboid
- 11 (b)
Each half pectoral girdle consists of suprascapula, scapula, coracoids, precoracoid, epicoracoid and paraglenoid cartilage, Clavicle is a slender rod, separated from the coracoids by a wide gap called coracoids foramen. Posteriorly scapula forms the upper half

- of a deep cup-like depression the glenoid cavity for articulation with the humerus bone of forelims.
- 12 **(b)**
In hinge joint, the convex surface of one bone fits into the concave surface of another bone, *e.g.*, knee, elbow and interphalangeal joints.
- 13 **(a)**
The thin filaments of a muscle fibre are made up of actin, troponin and tropomyosin.
- 14 **(c)**
Motor neuron with muscle fibre.
Muscle contraction is initiated by a signal sent by Central Nervous System (CNS), *via* motor neurons. A motor neuron along with the muscle fibres connected to it constitutes a motor unit
- 15 **(c)**
Muscle have been classified using different criteria, *i.e.*, location, appearance and nature of regulation of their activities. Based on their location three types of muscles are identified (i) Skeletal (ii) Visceral (iii) Cardiac
- 16 **(b)**
A complex protein, troponin is distributed at regular intervals on the tropomyosin. In the resting state, a subunit of troponin marks the active binding site for myosin on the actin filament
- 17 **(d)**
Pterygoid is a small skull bone articulated with the palatine.
- 18 **(c)**
The centrum of 8th vertebra of frog is amphicoelous, *i.e.*, concave at both ends. Its transverse processes are somewhat narrower, pointed and directed straight outwards. The neural spine is somewhat flattened and directed upwards.
- 19 **(d)**
All of the above

ANSWER-KEY										
Q.	1	2	3	4	5	6	7	8	9	10
A.	C	D	B	C	C	A	C	B	D	C
Q.	11	12	13	14	15	16	17	18	19	20
A.	B	B	A	C	C	B	D	C	D	A