



## TRY YOURSELF

## ANSWERS

1. (i) *Planaria* - Cilia and muscles  
(ii) Earthworm - Setae  
(iii) *Paramecium*—m- Cilia (or flagella as secondary locomotory organ)  
(iv) Starfish - Tube feet
2. Ciliary movement is a type of movement which occurs with the help of cilia. This movement occurs in most of our internal tubular organs lined by the ciliated epithelium.
3. Each isotropic bands (I band) in striated muscle fibres has at its centre a thin and dark membrane called Z-line is also called Z-disc or Krause's membrane or Dobie's line which connects the individual fibres.
4. Trypsin
5. The binding of acetylcholine (a neurotransmitter) on the motor end plate stimulates the opening of sodium ion into the muscle cell which generates an action potential in the sarcolemma.
6. Sliding filament theory was proposed by A.F. Huxley, Ralph Niedergerke and H.E. Huxley and J. Hanson in 1954.
7. Neuromuscular junction is a junction between a motor neuron and the sarcolemma of the muscle fibre. It is also known as motor end plate.
8. Tetanus is the continued state of muscle contraction due to which there is no gap between the stimuli for the fibres to relax, *i.e.*, the contraction and relaxation phases are much longer than the refractory period.
9. Myasthenia gravis causes weakening and paralysis of skeletal muscle. It is an auto-immune disorder affecting neuromuscular function.
10. The vertebrae curvatures increase the vertebral column's strength and flexibility. They have shock-absorbing resilience for the body. The curves are important for maintaining the balance and help us to stand upright.
11. The different types of vertebrae present in the vertebral column are : Cervical (7 in number), thoracic (12), lumbar (5), sacral (1 fused) and coccygeal (1 fused).
12. Glenoid cavity of scapula is a part of the shoulder. It is a shallow, pyriforms articular surface which is located on the lateral angle of the scapula into which head of humerus is articulated.
13. Each arm (forelimb) consists of 30 bones; 1 humerus (upper arm), 1 ulna and 1 radius (lower arm), 8 carpals (wrist), 5 metacarpals (palm) and 14 phalanges (digits).  
So, there are total 60 bones present in forelimb of man.
14. Ilium has one large depression, the greater sciatic notch through which the sciatic nerve, the longest nerve of body, passes. The ischium also has one small depression, the lesser sciatic notch.
15. Cartilaginous joints are slightly movable joints as there is a pad of white fibrocartilage between the ends of the bones and movement is only possible because compression of pad of cartilages, *e.g.*, joints between adjacent vertebrae.
16. Synovial fluid is secreted by synovial membrane into the synovial cavity. It acts as a seal, waterproofing the joint. This fluid also lubricates the joint.

