

## Topic :- Neural Control & Coordination

- Which of the following statements is true?
  - Saltatory conduction is seen in non-myelinated nerve fibres
  - Nissl's granules are found in muscles fibres
  - Non-myelinated nerve fibres do not possess nodes of Ranvier
  - Non-myelinated nerve fibres are completely enclosed by myelin sheath
- Nerve cells do not possess
  - Neurilemma
  - Sarcolemma
  - Dendrite
  - Axon
- Which of the following is an example of conditioned reflex?
  - Breast feeding
  - Swallowing of food
  - Blinding of eyes
  - Salivation in dog on seeing bread
- Select the correct arrangement of neural organization, according to the increasing degree of complexity
  - Lower invertebrates → Vertebrates → Insects
  - Lower invertebrates → Insects → Vertebrates
  - Vertebrates → Insects → Lower vertebrates
  - Vertebrates → Lower invertebrates → Insects
- 'Organ of Jacobson' helps in
  - Touch
  - Vision
  - Smell
  - Hear
- The nerve cells exercise its control by sending electrical signals called
  - Afferent nerve impulses
  - Efferent nerve impulses
  - Electrical impulses
  - Nerve impulses
- Synapse is the connection between
  - Two axon
  - Two dendrites
  - Axon and dendrites
  - Two neurons
- A person went to ophthalmologist. He had a problem in reading because he was not able to
  - Contract his iris
  - Contract ciliary muscle
  - Contract his pupil
  - Contract his ligaments

9. The size of pupil is controlled by the
- a) Ciliary muscles
  - b) Suspensory ligaments
  - c) Cornea
  - d) Iris muscles
10. Which of the following is correct regarding electrical synapses?
- I. Pre and postsynaptic membrane neurons are in very close proximity at electric synapse
  - II. Electric current are involved in the transmission of impulses
  - III. Transmission of an impulse across electrical synapses is very similar to impulse conduction along a single axon
  - IV. Impulse transmission is always faster in electric synapse than that across a chemical synapse
  - V. Electrical synapses are rare in our system
- The correct option is
- a) I, II, III and IV
  - b) I, III, IV and V
  - c) I, II and IV
  - d) I, II, III, IV and V
11. Which of the following is present in rod cells and useful in night vision?
- a) Vitamin-K
  - b) Melanin
  - c) Rhodopsin
  - d) Vitamin-C
12. .... nerve fibre is enclosed by a Schwann cell that do not form a myelin sheath around the axon
- a) Afferent
  - b) Unmyelinated
  - c) Myelinated
  - d) Efferent
13. In the resting stage of a neuron, concentration gradient generates due to
- a) High concentration of  $K^+$  and low concentration of  $Na^+$  inside the axon
  - b) High concentration of  $Na^+$  and low concentration of  $K^+$  inside the axon
  - c) low concentration of  $Na^+$  outside the axon
  - d) low concentration of  $K^+$  outside the axon
14. Scala vestibuli, scala media and scala tympani of human ear contains
- a) Perilymph, endolymph and perilymph respectively
  - b) Endolymph, perilymph and endolymph respectively
  - c) Perilymph, endolymph and endolymph respectively
  - d) Perilymph, haemolymph and endolymph respectively
15. An action potential in the nerve fibre is produced when positive and negative charges on outside and the inside of the axon membrane are reversed because
- a) More potassium ions enter the axon as compared to sodium ions leaving it
  - b) More sodium ions enter the axon as compared to potassium ions leaving it
  - c) All potassium ions leave the axon
  - d) All sodium ions enter the axon
16. Nissl's granules are found in
- a) Cell body
  - b) Dendrites
  - c) Both (a) and (b)
  - d) Axon

17. Which statements are wrong?  
I. Synaptic cleft of neurons secrete adrenaline.  
II. Myelinated nerve fibres are enveloped with Schwann cells, which form a myelin sheath around the axon.  
III. Non-myelinated nerve fibre is enclosed by a Schwann cell that does not form myelin sheath.  
IV. Spinal cord and cranial nerves are made of non-myelinated nerve fibres.  
Of the four statements,  
a) I, II are correct but III and IV are incorrect  
b) I, II and III are correct but IV is incorrect  
c) III and IV are correct but I and II are incorrect  
d) II and III are correct but I and IV are incorrect
18. The central information processing organ of our body is  
a) Heart                                      b) Spinal cord                                      c) Brain                                      d) All of the above
19. Which of the following statements are correct for cones of human eye?  
I. Cones are responsible for daylight vision  
II. Cones are responsible for colour vision  
III. Cones are responsible for photopic vision  
Choose the correct option  
a) Only I                                      b) I and II                                      c) II and III                                      d) I, II and III
20. During synaptic excitation  
a) The membrane potential of the post-synaptic cell hyperpolarizes  
b) The epsps are all or none in nature  
c) The epsps can summate  
d) After an epsp the photosynaptic cell passes through a refractory period