

NERVOUS SYSTEM : DAILY PRACTICE PAPER BY TEACHINGCARE.COM

1. When a neuron is not conducting any impulse, i.e., resting, the axonal membrane is

1. comparatively more permeable to potassium ions (K^+)
2. nearly impermeable to sodium ions (Na^+).
3. impermeable to negatively charged proteins present in the axoplasm.
4. All of the above

Ans 4

2. Choose the incorrect w.r.t. ionic gradients across the resting membrane

1. the axoplasm inside the axon contains high concentration of K^+
2. axoplasm inside the axon contains high concentration of negatively charged proteins
3. axoplasm inside the axon contains high concentration of Na^+ .
4. ionic gradients across the resting membrane are maintained by the active transport of ions by the sodium-potassium pump

ans 3

3. The ionic gradients across the resting membrane are maintained by the active transport of ions by the sodium-potassium pump which transports

1. 3 Na^+ outwards for 2 K^+ into the cell.
2. 2 Na^+ outwards for 3 K^+ into the cell
3. 3 Na^+ inward for 2 K^+ out of the cell
4. 3 Na^+ outwards for 1 K^+ into the cell.

Ans 1

4. which one of the following is incorrect regarding axonal membrane

1. the outer surface of the axonal membrane possesses a positive charge
2. its inner surface is negatively charged
3. axonal membrane is polarised.
4. The electrical potential difference across the resting plasma membrane is called as the **action potential**.

Ans 4

5. Which one of the following statements is not true about the mechanisms of generation of nerve impulse

1. When a stimulus is applied at a site (e.g., point A) on the polarised membrane, the membrane at the site A becomes freely permeable to Na^+ .
2. When a stimulus is applied at a site (e.g., point A), it leads to a rapid efflux of Na^+ followed by the reversal of the polarity at that site,
3. When a stimulus is applied at a site (e.g., point A) the outer surface of the membrane becomes negatively charged and the inner side becomes positively charged.
4. The electrical potential difference across the plasma membrane at the site A is called the **action potential**, which is in fact termed as a **nerve impulse**.

Ans 2

6. Choose the incorrect w.r.t. an electrical synapses,

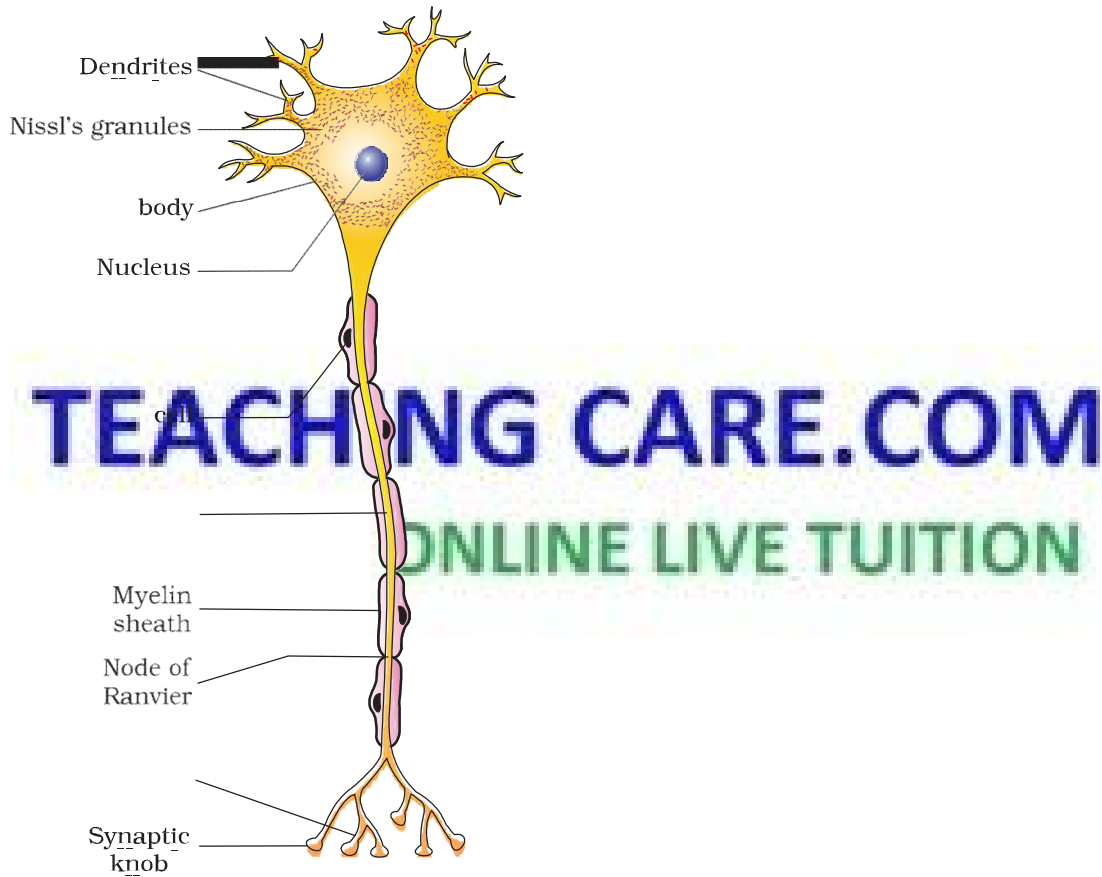
1. the membranes of pre- and post-synaptic neurons are in very close proximity.
2. Electrical current can flow directly from one neuron into the other across these synapses.

3. Transmission of an impulse across electrical synapses is very similar to impulse conduction along a single axon.

4. Impulse transmission across an electrical synapse is always slower than that across a chemical synapse.

Ans 4

7. The numerous granular substances around the nucleus in the neuroplasm of cell body of a neuron represent



1. precursors of neurotransmitter

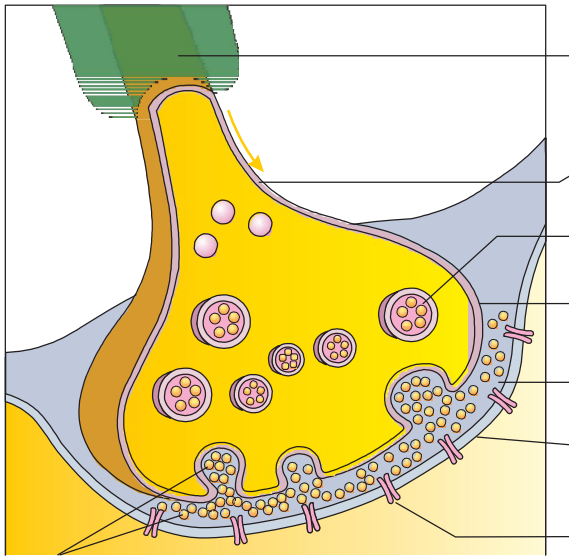
2. protein granules

3. Nissl's granules

4. ribosomal subunits

Ans 3

8. The small spherical bodies found inside the synaptic knob, as shown in the given diagram below, are



1. Neurotransmitter molecules
2. Synaptic vesicles
3. Synaptic cleft
4. Synaptic vesicles containing neurotransmitter molecules

Ans 4

9. The cerebral hemispheres are connected by a tract of nerve fibres called

1. **corpus callosum**
2. arachnoid
3. cranial meninges
4. corpora quadrigemina

Ans 1

10. The inner parts of cerebral hemispheres and a group of associated deep structures like amygdala, hippocampus, etc., form a complex structure called the

1. limbic lobe
2. limbic system.
3. Both 1 and 2
4. **association areas**

ans 3

11. The limbic system along with the hypothalamus, is involved in the

1. regulation of sexual behaviour only
 2. expression of emotional reactions (e.g., excitement, pleasure, rage and fear),only

3. motivation
4. all the above

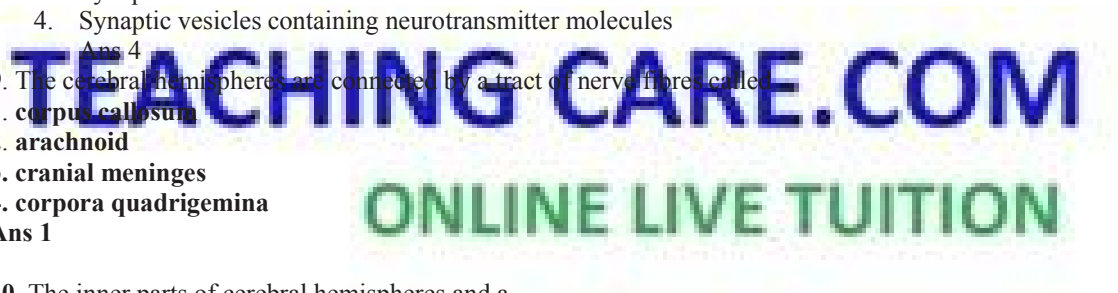
ans 4

12. The dorsal portion of the midbrain consists mainly of four round swellings (lobes) called

1. **corpora quadrigemina.**
2. **Corpus callosum**
3. Corpus striatum
4. **cerebral aqueduct**

ans 1

13. choose the incorrect w.r.t. the hindbrain



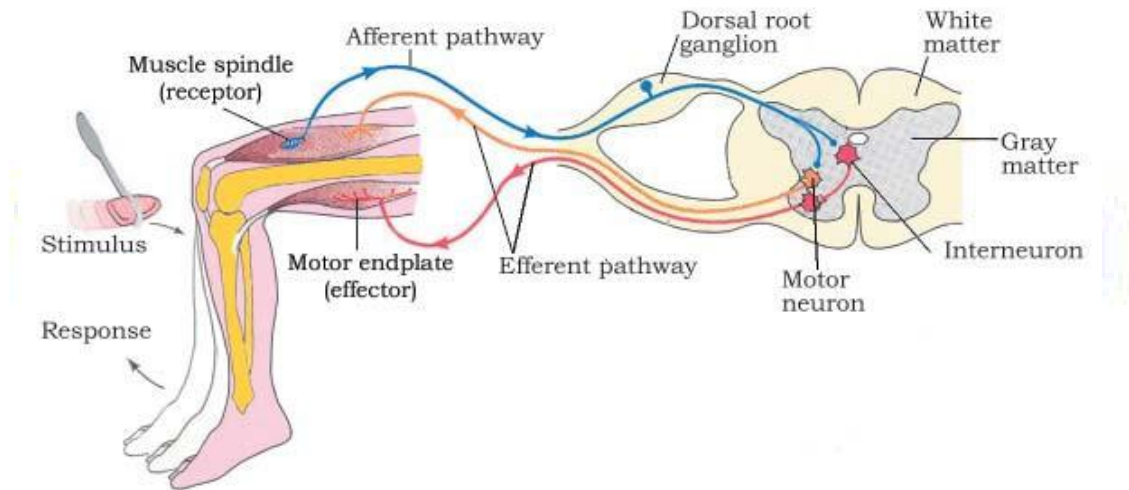
1. it comprises of **pons, cerebellum** and **medulla**
 2. Pons consists of fibre tracts that interconnect different regions of the brain.
 3. Cerebellum has very convoluted surface in order to provide the additional space for many more neurons.
 4. The medulla of the brain is connected to the midbrain
- ans 4.

14. The medulla contains centres which control

1. respiration only
2. cardiovascular reflexes only
3. gastric secretions
4. All the above

Ans 4

15. The following diagramme represents



1. The mechanism of control of muscle movement
 2. T.S. of spinal cord
 3. reflex action
 4. involuntary action
- ans 3