

Topic :- Neural Control & Coordination

- 1 (c)
A -Nodes of Ranvier, B-Neurolemma, C-Schwann cell.
There are two types of axons, *i.e.*, myelinated and non-myelinated. The myelinated nerve fibres are enveloped with Schwann cells which form a myelin sheath around the axon. The gaps between two adjacent myelin sheath are called nodes of Ranvier
- 2 (d)
The inner ear consists of a labyrinth of channels within a skull bone (the temporal bone). The part of the inner ear involved in hearing is cochlea. The cochlea has two large chambers, an upper vestibular canal and a lower tympanic canal, separated by a smaller cochlear duct. The vestibular and tympanic canals filled with perilymph, while cochlear duct is filled with endolymph.
- 3 (d)
A small oval, yellowish area of the retina lying exactly opposite to the centre of the cornea is named the macula lutea or yellow spot which as its middle has a shallow depression, the fovea-centralis. The fovea centralis has cone cells only. It is devoid of rods and blood cells
- 4 (a)
The electrical potential difference across the resting plasma membrane is called as the resting potential.
- 5 (d)
CNS lies along the main longitudinal axis of the body. The CNS consists of two parts, brain and spinal cord. It is the site of information processing and control.
PNS comprises of all the nerves (cranial nerves and spinal nerves) of the body associated with the CNS. The nerve fibres of the PNS are two types, *i.e.*, afferent and efferent fibres
- 6 (c)
Parietal lobe of brain has taste area.
- 7 (d)
All of the above.
The cerebral cortex contains motor areas, sensory areas and large regions that are neither clearly sensory motor in function. These regions are called as the association areas. These are responsible for complex functions like intersensory associations, memory and communication
- 8 (b)
Presence of Nissl's granules (bodies of large and irregular masses of ribosomes and

RER) is a characteristic feature of neurons.

9

(c)

There are two types of photoreceptor cells of retina, namely rods and cones. The rods contain a purplish red protein called the **rhodopsin** or visual purple, which contains a derivative of vitamin-A.

10

(b)

Homeostasis is the property of a system that regulates its internal environment and tends to maintain a stable, relatively constant condition of properties such as temperature or pH. It can be either an open or closed system

11

(b)

Corpus callosum is a neural connection between two cerebral hemispheres of mammals.

12

(b)

Multipolar neurons are the neurons with one axon and two or more dendrites. These are found in the cerebral cortex

13

(d)

The system, which is responsible for providing an organized network of point to point connection for a quick coordination is called neural system. This system is made up of highly specialized cells called neurons, which detects the stimuli throughout the body and transmit it to the brain

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(a)

The myelinated nerve fibres are enveloped with Schwann cells, which form a myelin sheath around the axon

15

(b)

The black pigment present in retina is Retinal Pigment Epithelium (RPE), that nourishes retinal visual cells and shields the retina from excess incoming light. The RPE, is composed of a single layer of hexagonal cells that are densely packed with pigment granules

16

(b)

Cranial nerves are not part of central nervous system. Cranial nerves are the part of voluntary nervous system and arise from the brain.

17

(a)

Sympathetic nervous system dilates the pupils, therefore, permitting more light to enter into the eyes. Sympathetic nervous system includes a chain of sympathetic ganglia.

18

(a)

The myelin sheath appears as a tube around the axon of nerve fibre. At regular intervals, the neurilemma is constricted and the myelin sheath is interrupted forming the so, called **nodes of Ranvier**.

19

(d)

The upper or superior surface of the 'midbrain' has two pairs of rounded protrusions collectively called the **corpora quadrigemina**; one pair is called superior colliculi and the other pair is called inferior colliculi.

20

(a)

A-Sense organ B-Sensory nerve

C-Dorsal horn D-Interneuron

E-Ventral horn F-Motor nerve

GvEffector

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

PE