Board- ICSE	Std- 7th	Topic- Nervous system

Multiple Choice Questions:

(a) Medulla oblongata controls

(i) Smelling

(ii) Beating of heart and respiratory movement

(iii) Intelligence and will power

(iv) Balancing the body

(b) Spinal cord is an extention of:

(i) Cerebellum

(ii) Cerebrum

(iii) Vertebral column

(iv) Medulla oblongata

(c) Body posture is mantained by:

(i) Cerebellum

(ii) Cerebrum

(iii) Medulla oblongata

(iv) Spinal cord

Q.2 Write one word in the space provided to complete the second pair of the related words pertaining to nervous system. Memory: cerebrum:: breathing: Balance: cerebellum:: reasoning:

Answer:

Memory: cerebrum: beathing: medulla oblongata

Balance: cerebellum:: reasoning: cerebrum

Q.3 (a) Name three major divisions of the human nervous system.

Answer:

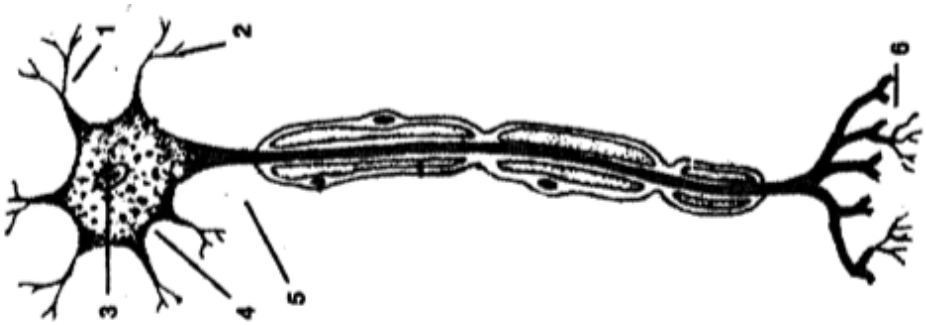
1. The central nervous system (brain and spinal cord)
2. The peripheral nervous system
3. The autonomic nervous system

(b) Name the three main parts of human brain.

Answer:

1. Cerebrum 2. Cerebellum 3. Medulla oblongata

Q.4 Given here is the diagram of a neuron. Name the parts numbered 1-6.

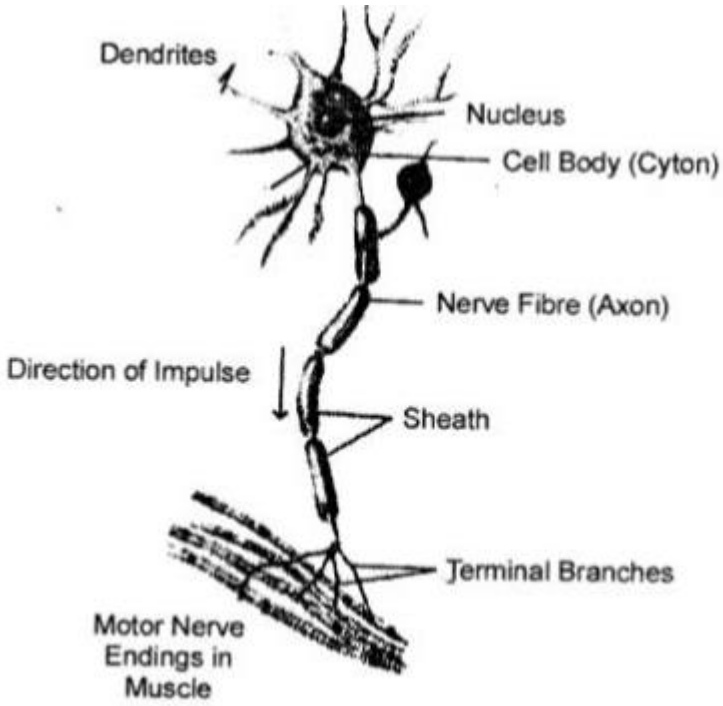


1. ..... 2. ..... 3. .....
4. ..... 5. ..... 6. .....

Answer:

1. dendrite
2. dendrite (Terminal Arborization)
3. nucleus
4. axon (Nerve fibre)
5. cell Body (cyton)
6. node of ranvier
7. sheath

Q.5 With the help of a suitable diagram describe the structure of a neuron.



A nerve cell

Nervous system consists of special cells called nerve cells or neurons. It has a main cell body called cyton. It gives out many processes called dendrites. From it a very long process is given out. It is called axon or nerve fibre. The cell body has a nucleus. The dendrites get the message from the organs and send this message to the axon through the cell body. Then the axon sends the message to muscles to contrast or to the gland for secretion. The neurons make contact with one another through their processes. The axon at its end branches and meets the dendrites of another neuron. The meeting point is called synapse. The message is passed on from one axon to the dendrites of another neuron. the message goes like this: Organ → Message goes to dendrites →Cell body → Axon → Muscles or glands

Q.6 Briefly describe the structure of the cerebrum in human brain, and mention its functions.

Answer: Brain consists of main three parts and lies in the cranial cavity of skull.

1. The cerebrum

2. The cerebellum 3. The medulla oblongata

Cerebrum — It is very large and form two third of the whole brain. The two hemispheres are separated from each other by a deep longitudinal groove, the median fissure. The outer surface is folded with ridges and grooves. The hemispheres are hollow from inside and their walls have outer and inner portions. The outer portion has cell bodies of the neurons and it is called grey matter. The wavery edges of the folded layer has large number of neurons to the extent of nine billion. The inner portion of the cerebrum has axons and it is called white matter. Functions:

1. It controls all the voluntary activities.

2. It is the seat of intelligence, consciousness and will power.

Q.7 Mention the three functions of spinal cord.

Answer: Spinal cord has the following functions.

1. It is the centre of reflex actions below the neck.

2. It carries messages from the skin and muscles to the brain.

3. All the stimuli and responses are passed from and to the brain through the spinal cord.

Q.8 Describe three kinds of nerves, giving example of each.

Answer: A nerve is formed by a group of nerve fibres (axons) encased by tubular medullary sheath. The medullary sheath acts as insulation and do not allow mixing up of impulses of the neighbouring axons (nerve fibres) We have three kinds of nerves:

1. Sensory nerve — It brings impulses from sense organs as these have sensory fibres. These nerve carry the impulses from the sense organs to the brain or to the spinal cord as optic nerve of the eye.

2. Motor nerves—These carry impulses to muscles or glands from the brain or spinal cord. These nerves have only motor fibres as nerves to the muscles of the eye ball.

3. Mixed nerve — It has both sensory and motors fibres as nerve going to the tongue.

Q.9 What are voluntary and involuntary actions ? Which part of the nervous system controls them?

Answer: Voluntary action: When an action is produced with the involvement of thoughts, they are called the voluntary action. For example, writing an article jumping from heights. These actions are produced consciously by our body. Involuntary action: Actions which take place without consciousness or willingness of an individual are called the involuntary action. Digestion, heart beating, sneezing, etc are few examples of involuntary actions.

1. The cerebral cortex controls our voluntary actions like running and walking etc.
2. Medulla helps in involuntary actions like hearbeat, breathing etc.