



BIOLOGY

BOOKS - SURA BIOLOGY (TAMIL ENGLISH)

NERVOUS SYSTEM

Textbook Evaluation Choose The Correct Answer

1. Bipolar neurons are found in_____

A. retina of eye

B. cerebral cortex

C. embryo

D. respiratory epithelium

Answer: A



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2. Site for processing of vision, hearing memory, speech, intelligence and thought is ____

A. Kidney

B. ear

C. brain

D. lungs

Answer: A::B



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3. Oin reflex action,the reflex arc is formed by_

A. brain,sprinal coed,music

B. receptor,muscle,spinal cord

C. muscle,receptor,brain

D. receptor,spinal coed,muscle

Answer: A::C::D



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4. Dendrites transmit impulse_____cell body
and axon transmit impulse_____ cell body.

A. Away from,away from

B. towards,away from

C. towards,towards

D. away from,towards

Answer: A::D



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5. The outer most of the three cranial meninges

is_____

A. arachnoid membrane

B. piamater

C. duramter

D. myelin sheath

Answer: A::D



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6. There are _____ pairs of cranial nerves and _____ pairs of spinal nerves.

A. 12,31

B. 31,12

C. 12,13

D. 12,21

Answer: A::B::C



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7. The neurons which carries impulse from the central nervous system to the muscle fibre.

A. afferent neurons

B. association neuron

C. effecrent neuron

D. unipolar neuron

Answer:



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8. Which nervous band connects the two cerebal hemispheres of braiin?

A. thalamus

B. hypothalamus

C. corpus callosum

D. pons

Answer: A::B::C::D



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9. Node of ranvier is found in_____

A. muscles

B. axons

C. dendrites

D. cyton

Answer: A



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10. Vomiting centre is located in_____

A. Medulla oblongata

B. stomach

C. cerebrum

D. hypothalamus

Answer: A::B::D



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11. Nerve cells do not possess __

A. neurilemma

B. sarcolemma

C. axon

D. dendrites

Answer: A::C



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12. A person who met with an accident lost control of body temperature ,water balance and hunger.Which of the following part of brain is supposed to be damaged?

A. Medulla oblongata

B. cerebrum

C. pons

D. hypothalamus

Answer: A



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Textbook Evaluation Fill In The Blanks

1. _____ is the longest cell in our body



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2. Impulses travels rapidly in _____ neurons



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3. A change in the environment that causes an animal to react is called _____



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4. _____ carries the impulse towards the cell body.



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5. The two antagonistic component of autonomic nervous system are ___ and ___



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6. A neuron contains all cell organelles except ___



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7. _____ maintains the constant pressure inside the cranium.



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8. _____ and _____ increases the surfaces area of cerebrum.



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9. The part of human brain which acts as relay centre is_____.



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**Textbook Evaluation State Whether True Or False
If False Write The Correct Statement**

1. Dendrons are the longest fibres that conducts impulse away from the cell body.



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2. Sympathetic nervous system is a part of central nervous system.



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3. Hypothalamus is the thermoregulatory centre of human body.



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4. Cerebrum controls the voluntary actions of our body.



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5. In the central nervous system myelinated fibres from the white matter.



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6. All the nerves in the body are covered and protected by meninges.



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7. Cerebrospinal fluid provides nutrition to brain



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8. Reflex arc allows the rapid response of the body to a stimulus.



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9. Pons helps in regulating respiration.



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Textbook Evaluation Match The Following

1. 



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Textbook Evaluation Understand The Assertion Statement Justify The Reason Given And Choose The Correct Choice

1. Asseration : cerebrospinal fluid is present throughtout the central nervous system .

Reasons : cerebrospinal fluid has no such functions.

A. Assertion is correct and reason is wrong

B. Reason is correct and the assertion is
wrong

C. Both assertion and reason are correct

D. Both assertion and reason are wrong

Answer: A



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2. Assertion: Corpus callosum is present in space between the duramater and piamater.

Reason: It serves to maintain the constant intracranial pressure.

A. Assertion is correct and reason is wrong

B. Reason is correct and the assertion is wrong

C. Both assertion and reason are correct

D. Both assertion and reason are wrong

Answer: D



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Textbook Evaluation Short Answer Question

1. Define stimulus.



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2. Name the parts of the mind hind brain.





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3. What are the structures involved in the protection of brain?



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4. Give an example for conditioned reflexes.



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5. Which acts as a link between the nervous system and endocrine system?



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6. Define reflex arc.



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Textbook Evaluation Differentiate Between

1. Medullated and non-medullated nerve fibre.



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Textbook Evaluation Long Answer Questions

1. Explain the structure of a neuron.



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2. Describe the structure and function of human brain.



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3. What will you do if someone pricks your hand with a needle? Elucidate the pathway of response with a neat labelled diagram.



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4. How nerve impulses are transferred from one neuron to next neuron?



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5. Classify neurons based on its structure.



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**Textbook Evaluation Higher Order Thinking Skills
Hots**

1. 'A' is a cylindrical structure that begins from the lower end of the medulla and extends downwards. It is enclosed in a bony cage 'B' and covered by membranes 'C'. As many as 'D' pairs of nerves arise from the structure 'A'.

(i) What is A?

(ii) Name (a) bony cage 'B' and (b) membranes 'C'

(iii) How many are D?



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2. Our body contains a large number of cells. Which are the longest cells in the body? L has long and short branch called as 'M' and 'N' respectively. There is a gap 'O' between two 'L' cells through which nerve impulse transfer by release of chemical substance 'P'

(i) Name the cells L

(ii) What are M and N?

(iii) What is the gap O?

(iv) Name the chemical substance P



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Additional Questions Answers Choose The Correct Answer

1. The autonomic nervous system is regulated by___of brain.

- A. Cerebrum
- B. pons
- C. hypothalamus
- D. medulla

Answer: A





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2. Sneezing,yawning etc are example of _____

- A. Voluntary actions
- B. Involuntary actions
- C. reflex actions
- D. planned actions

Answer: A::C



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3. The _____ has a role in sleep cycle.

A. cerebrum

B. Spinal cord

C. pons

D. hypothalamus

Answer:



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4. Pick the option which is not a characteristic of neuron.

A. Dendrites

B. axons

C. axolemma

D. can divide

Answer: A::C::D



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5. the _____ is the second largest part of the brain.

A. Cerebrum

B. medulla

C. cerebellum

D. pons

Answer: C



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6. _____ is the longest cell in our body

A. Neuron

B. Neuroglia

C. Nerve fibres

D. Cyton

Answer:



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7. Neuroglia are also called as _____

A. Nerve fibres

B. Glial cells

C. Neuron

D. Nerve cell

Answer: A:C



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8. Cyton is also called cell body or _____

A. Axon

B. Perikaryon

C. Neuroglia

D. Neuron

Answer: A



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9. The cytoplasm has granular body called _____

A. Nissl's granules

B. nerve fibres

C. glial cells

D. nerve cells

Answer: A



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10. Neurons do not have the ability to _____.

A. multiply

B. divide

C. regenerate

D. receive

Answer: D



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11. The plasma membrane of axon is called_____.

A. Axolemma

B. axoplasm

C. myelin sheath

D. schwann cells

Answer: A



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12. The axons may be covered by a protective sheath called_____

- A. Myelin
- B. Nodes of Ranvier
- C. Schwann cells
- D. Nissl's granules

Answer:



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13. _____ acts as an insulator.

A. Myelin sheath

B. synaptic junction

C. nodes of Ranvier

D. glial cells

Answer: A



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14. _____ carry impulses from the sense organ to the central nervous system.

A. unipolar neurons

B. efferent neurons

C. motor neurons

D. sensory neurons

Answer:



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15. Each neuron can transmit _____ nerve impulses per second

A. 2000

B. 3000

C. 1000

D. 5000

Answer: A



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16. The _____ is the controlling centre of all the body activities.

A. Heart

B. Brain

C. kidney

D. liver

Answer: A::B



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17. _____ is the innermost, thin delicate membrane richly supplied with blood.

A. Durameter

B. Myelin sheath

C. Piameter

D. Arachnoid membrane

Answer: A



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18. _____ is an inflammation of the meninges.

A. Meningitis

B. Myelin sheath

C. Pia mater

D. Arachnoid membrane

Answer:



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19. A human brain is formed of ____ main parts.

A. Three

B. four

C. two

D. six

Answer:



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20. _____ is the largest portion of the brain.

A. thalamus

B. Cerebrum

C. Diencephalon

D. Cerebellum

Answer: B::C



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21. The part of human brain which acts as relay centre is_____.

A. thalamus

B. Hypothalamus

C. Cerebrum

D. Cerebellum

Answer: A



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22. _____ is located between thalamus and hindbrain.

A. Forebrain

B. Midbrain

C. Cerebral lobes

D. Hypothalamus

Answer: A::B::D



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23. the _____ is the second largest part of the brain.

A. Cerebellum

B. Cerebrum

C. Thalamus

D. Diencephalon

Answer: B::C



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24. Pons is a bridge of_____.

A. Neuron

B. Nerve fibre

C. Neuroglia

D. glial cells

Answer: B



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25. ___ carry command from spinal cord to our arm.

- A. Motor neurons
- B. Sensory neurons
- C. Unipolar neurons
- D. Affecrent neurons

Answer:



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26. Peripheral neurons system is formed by the nerves arising from the_____.

A. Brain and the spinal cord.

B. Dorsal or afferent root.

C. Ventral or efferent root.

D. Spinal nerves.

Answer: A::B::C::D



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Additional Questions Answers Fill In The Blanks

1. The cytoplasm has granular body called _____



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2. The axons may be covered by a protective sheath called _____



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3. Myelin sheath breaks at intervals called_____.



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4. The efferent neurons are also called_____.



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5. The afferent neurons are called_____.



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6. _____ conducts impulses between sensory and motor neurons.



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7. The efferent neurons are also called _____.



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8. The forebrain is made of cerebrum and _____.



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9. _____ is the innermost membrane of the brain.



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10. The outermost membrane covering the brain is _____,



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11. The bridge of nerve fibre which connects lobes of cerebellum is _____



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12. The posterior most region of spinal cord tapers to from_____



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13. There are____pairs of cranial nerves and _____ pairs of spinal nerves.



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14. Cerebrospinal fluid provides nutrition to brain



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15. The term visceral nervous systems refers to _____.



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16. In a reflex action, involving touching a hot pan, the muscle acts as a_____.



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17. The pathway of nervous impulse involved in winking of eyes when dust falls is called_____



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18. Junction between two neurons



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19. Acquired reflexes are called _____.



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20. spinal cord contains a cerebrospinal fluid filled cavity known as the _____.



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21. _____ is an inflammation of the meninges.



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22. Vomiting and salivation is regulated by



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23. _____ can detect abnormalities in the brain waves.



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24. ____ are called as gila cells.



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25. Non-exciting supporting cells of the nervous system_____.



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26. The plasma membrane of axon is called_____.



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27. The plasma membrane of axon is called_____.



[Watch Video Solution](#)

28. The axons may be covered by a protective sheath called_____



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29. Myelin sheath breaks at intervals called_____.



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30. Myelin sheath acts as an_____



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31. A junction between synaptic knob of axon of one neuron and dendron of next neuron is called



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32. Retina of the eye is made up of _____ neurons.



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33. _____neurons are found in the cerebral cortex of the brain.



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34. _____nerve fibre from the white matter of the brain.



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35. Non-myelinated nerve fibre from the _____ matter of the brain.



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36. Only one nerve process arises from the cyton in _____ neuron.



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37. Cyton gives rise to many dendrons and an axon in _____ neuron.



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38. The autonomic nervous system regulates the function of _____



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39. The important neurotransmitter released by neurons is called_____.



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40. The outermost membrane covering the brain is _____,



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41. _____membrane providing a web like cushion for the brain.



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42. _____is the innermost membrane of the brain.



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43. Meninges membranes protect the brain from_____



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44. Information from the environment are detected by_____located in our sense organs.



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45. The ____ is an effector organ in transmission of impulses.



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46. A human brain is formed of ____ main parts.



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47. Midbrain controls ____.



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48. _____part of brain relay signal between the cerebellum,spinal cord,mid brain and cerebrum.



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49. _____are inbuilt and unlearned responses.



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50. _____ neuron conveys the message to the spinal cord.



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51. ___ carry command from spinal cord to our arm.



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52. _____ helps in rotation of eye ball.



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53. Hypothalamus acts as _____centre of the body.



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54. _____ si the largest portion of the brain.



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55. _____ of the brain are interconnected by thick band of nerve fibres called corpus callosum.



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56. Cerebral hemisphere of the brain is formed of grey matter is called _____.



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57. Inner or deeper part of the brain is formed of white matter is called_____.



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58. Cortex is extremely folded forming elevations called_____.



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59. Hypothalamus lies at the base of the_____.



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60. Dorsal portion of the mid brain consists of ___ called corpora quadrigemina.



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61. The most crucial molecules that determine our brain's integrity and the ability are called _____.



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62. _____ increases the surface area of cortex.



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63. _____ controls respiration and sleep cycle.



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64. _____ can detect abnormalities in the brain waves.





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65. spinal cord contains a cerebrospinal fluid filled cavity known as the_____.



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66. Spinal cord control_____ of the body.



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67. ____ of the brain coordinates voluntary movements, posture maintenance and balance.



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68. ____ maintains the constant pressure inside the cranium.



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69. _____ are the long slender process of neurons.



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70. _____ present in the cytoplasm help transmission of impulse of the cell body.



[Watch Video Solution](#)

71. _____ carries the impulse towards the cell body.



[Watch Video Solution](#)

72. Nerve arising from spinal cord are _____.



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73. _____ carry impulses from the sense organ to the central nervous system.



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74. The neurons which carries impulse from the central nervous system to the muscle fibre.



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75. Cyton has a central nucleus with abundant cytoplasm called_____



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76. The end of an axon terminates into knob like swelling called_____.



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77. Myelin sheath of an axon is covered by a layer of cells called_____



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78. _____ is a chemical released during the passing of information from one neuron to another neuron.



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79. Information is conducted through neurons in the form of _____ from one part of the body to another.



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80. A number of ____ are bundled up together to form nerves.



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81. Cyton is also called cell body or _____



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82. _____ refers to the changes in the environmental condition, that are detected by

receptors present in the body.



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83. Relevant changes in the activities of organisms to a particular stimuli are called their_____.



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84. Other name of neuron is _____.



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85. _____ is the longest cell in our body



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86. Length of the neuron is _____.



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[Additional Questions Answers Fill In The Blanks](#)

1. Spinal cord lies in the _____ of the vertebral column.



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Additional Questions Answers State Whether The Following Statements Are True Or False Correct The False Statement

1. Spinal cord control _____ of the body.



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2. The duramater is the closest to the brain



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3. Cerebellum co-ordinates involuntary activities.



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4. When we do not wear helmets, injury to the medulla can be fatal.



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5. The central nervous system has cranial and spinal nerves.



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[Additional Questions](#) [Answers](#) [Assertion And Reason](#)

1. Assertion: The ability of the brain is determined by the presence of essential fatty

acids.

Reason: They are obtained from fish, green leafy vegetables, almond etc.

A. Both assertion and reason are true but

reason

B. Both assertion and reason are true but

reason

C. Both assertion and reason are true but

reason

D. Both assertion and reason are true but
reason

Answer: A::B::C::D



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2. Assertion: Meningitis is a disorder of the
brain

Reason: It leads to psychological disturbances.

A. Both assertion and reason are true but
reason

B. Both assertion and reason are true but
reason

C. Both assertion and reason are true but
reason

D. Both assertion and reason are true but
reason

Answer: A::B::D



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Additional Questions Answers Analogy Type Questions Identify The First Words And Their Relationship And Suggest A Suitable Word For The Fourth Blank

1. Bipolar neurons :Retina of eye::Multipolar neurons:_____



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2. Acquired reflexes are called_____.



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3. One nerve process: Unipolar neurons Two
nerve process: _____



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4. Sense organ to CNS: _____ CNS to muscle
fibre: Efferent neuron



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5. Intelligence: cerebrum body balance: _____



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6. Creativity :Cerebral cortex role in
sleep: _____



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**Additional Questions Answers Answer In One
Word**

1. Structural and functional unit of nervous system_____.



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2. Non-exciting supporting cells of the nervous system_____.



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3. Site of protein synthesis in a cyton_____.



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4. Junction between two neurons



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5. Protective sheath found above myelin sheath _____



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6. Protective sheath covering the axon.



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7. An example of a neurotransmitter.



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8. Membranes covering the brain



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9. Tissue connecting lobes of cerebrum



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10. Four rounded bodies found in mid brain



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11. What does the word 'pons' mean



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12. Posterior part of spinal cord.



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13. Special fluid nourishing the brain.



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Additional Questions Answers Very Short Answers

1. What are neuroglia?



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2. What is myelin sheath?



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3. What is the function of myelin sheath?



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4. Name the parts of a neuron.



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5. Name the meninges.



[Watch Video Solution](#)

6. Name the cerebral lobes.



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7. Name the two components of autonomic nervous system.



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8. How are neurons classified based on function?



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9. What is a neurotransmitter?



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10. What is EEG?



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Additional Questions Answers Short Answers

1. What is peripheral nervous system?



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2. Name the components of nervous system.



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3. List the function of cerebrospinal fluid.



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4. Differentiate simple reflexes and conditional reflexes.



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Additional Questions Answers Long Answers

1. Tabulate the different parts of the brain and their functions.



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Additional Questions Answers Higher Order
Thinking Skills Hots

1. When we touch a cactus unknowingly, we get pricked by the thorns. We withdraw our hands immediately. Which type of neuron gets activated first.



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2. Some situations in our day to day life require quick response from our body. Illustrate the sentence with the help of common example.





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Additional Questions Answers Value Based Questions

1. Rani fell from her bike and had a had injury. She was hospitalized and discharged later. What do you think she could have done to save herself from this accident?



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2. A' contains a cerebrospinal fluid filled cavity known as 'B'.How many nerves are produced from'A'.

(i)What is 'A'?

(ii)What is 'B'?



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Additional Questions Answers Expand The Following Abbreviations

1. Full form of 'EEG'



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2. Full form of 'CNS'



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3. Full form of 'PNS'



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4. Full form of 'ANS'



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5. Full form of 'EFA'



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6. Full form of 'CSF'



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