



# BIOLOGY

## NCERT - NCERT Biology(Tamil)

### 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:**



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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:**



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**3. Oin reflex action,the reflex arc is formed by\_**

A. brain, spinal cord, muscle

B. receptor, muscle, spinal cord

C. muscle, receptor, brain

D. receptor, spinal cord, muscle

**Answer:**



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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:**



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**5.** The outer most of the three cranial meninges

is \_\_\_\_\_

A. arachnoid membrane

B. piamater

C. duramater

D. myelin sheath

**Answer:**



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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:**



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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. efferent neuron

D. unipolar neuron

**Answer:**



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**8.** Which nervous band connects the two cerebral hemispheres of brain?

A. thalamus



B. hypothalamus

C. corpus callosum

D. pons

**Answer:**



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9. Node of ranvier is found in \_\_\_\_

A. muscles

B. axons

C. dendrites

D. cyton

**Answer:**



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**10.** Vomiting centre is located in\_\_\_\_\_

A. medulla oblongata

B. stomach

C. cerebrum

D. hypothalamus

**Answer:**



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**11.** Nerve cells do not possess \_\_

A. neurilemma

B. sarcolemma

C. axon

D. dendrites

**Answer:**



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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:**



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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. Fill in the blanks:

(i) \_\_\_\_\_ and \_\_\_\_\_ increases the surface area of cerebrum.

(ii) Impulses travels rapidly in \_\_\_\_\_ neurons.



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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. Match the following

Column I	Column II
A. Nissl's granules	Forebrain
B. Hypothalamus	Peripheral Nervous system
C. Cerebellum	Cyton
D. Schwann cell	Hindbrain



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

1. Assertion : cerebrospinal fluid is present throughout 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:**



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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:**



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## Textbook Evaluation Short Answer Questions

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. Voluntary and involuntary actions.



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2. Medullated and non-medullated nerve fibre.



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**Textbook Evaluation Long Answer Questions**

1. With a neat labelled diagram explain the structure of a neuron.



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2. Illustrate the structure and functions of 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. (i) Describe the structure of spinal cord.

(ii) What are heart sounds? How are they produced?



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



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6. Classify neurons based on its structure.



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1. A' is a cylindrical that begins from the lower end of medulla and extend downwards. It is enclosed in 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 much is D?



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2. '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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3. '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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4. Our body contains a large number of cells 'L' 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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5. Our body contains a large number of cells 'L' 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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6. Our body contains a large number of cells 'L' 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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7. Our body contains a large number of cells 'L' 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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