BIOLOGY

BOOKS - EVERGREEN BIOLOGY (ENGLISH)

NERVOUS SYSTEM

Review Questions

1. Name the following: Neurotransmitter that conducts nerve impulse through synapse.

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2. Name the following: Part of brain that maintains balance.

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3. Name the following: Part of nervous system that acts violently during emergency.

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4. Name the following: lons responsible for the conduction of nerve impulse.

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5. Name the following: Neurotransmitter that conducts nerve impulse through synapse.

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6. Name the following: The biological term given to the protective membranes of the brain.

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7. Name the following: The parts of human brain concernud with

(a) seat of memory (b) coordinates muscular activity.

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8. Name the following: The parts of human brain concernud with

(a) seat of memory (b) coordinates muscular activity.

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9. Name the fibre tracts that channel information into and out of the cerebellum.

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10. Name the following: The fluid that provides protection and nourishment to the cells of the brain.

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11. The cell body of a nerve cell

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12. Differentiate between : Cerebrum and Cerebellum.

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13. Differentiate between : Gray matter and White matter.

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14. Differentiate between : Nerve impulse and Electric current.

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15. Differentiate between : Natural and Conditioned reflex.

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16. Differentiate between : Synapse and Synapsis.

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17. Differentiate between : Cerebrum and Spinal cord (Arrangement of cytons and axons of neurons).

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18. Differentiate between : Spinal and Cranial nerves (Number of nerves)

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19. Differentiate between : Cerebrum and Spinal cord (Arrangement of nerve cell)

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20. Name various parts of the brain and state functions of each part.

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21. Define the following term : Stimulus.

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22. Define the following term : Response.

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23. Define the following term : Synapse.

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24. Define the following term : Dendrites.

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25. Define the following term : Impulse.

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26. What do you mean by reflex action? What is its mechanism and significance ?

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27. Given below is a table comparing the effects of sympathetic and parasympathetic nervous system for four feature (1-4). Which

one feature is correctly described ?

S. No.	Feature	Sympathetic nervous system	Parasympathetic nervous system
(1)	Salivary glands	Stimulates secretion	Inhibits secretion
(2)	Pupil of the eye	Dilates	Constricts
(3)	Heart rate	Decreases	Increases
(4)	Intestinal peristalsis	Stimulates	Inhibits

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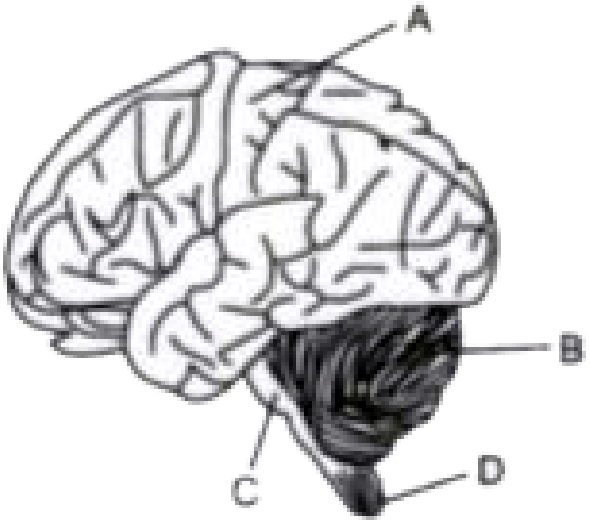
28. The following diagram represents the human brain as seen in an external view. Study the same and then answer the questions that

follow :



(i) Name the part labelled A, B, C and D.

(ii) Mention the difference in the arrangement of the nerve cells in the parts marked 'A' and 'D'

(iii) What is the main function of the parts marked 'C and 'D'?

(iv) Name the sheet of nerve fibres that connect the two halves of the part labelled.

(v) Name the basic unit of brain.

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29. Re-write in correct logical sequence : Dorsal root ganglion, sensory neuron, motor neuron, receptor.

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30. Re-write in correct logical sequence : Motor, neuron receptor, sensory neuron, effector, association neuron. (Pathway of nerve impulses)

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31. Re-write in correct logical sequence : Spinal cord, Motor neuron, Receptor, Effector, Sensory neuron.

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32. Re-write in correct logical sequence : Receptor, Spinal cord, Effector, Motor neuron, Sensory neuron.

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33. Explain the term Reflex action.

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34. State whether following actions are voluntary action, simple reflex or conditioned reflex.

(1) Blinking

(2) Cleaning the table

(3) Fiaying on the keyboard

(4) Salivating when food is put in the mouth.

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35. The following diagram is that of a human brain. Guidelines 1 to 5 indicate different parts of the surface of the brain and these are as follows:

(1) Frontal lobe of cerebrum.

(2) Temporal lobe of cerebrum

(3) Occipital lobe of cerebrum,

(4) Cerebellum, and

(5) Medulla oblongata.

Study the diagram and answer the following questions:

What handicaps would result from:

(i) damage to part numbered 3 ?

(ii) damage to part numbered 4 ?

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36. The following diagram is that of a human brain. Guidelines 1 to 5 indicate different parts of the surface of the brain and these are as follows:

(1) Frontal lobe of cerebrum.

(2) Temporal lobe of cerebrum

(3) Occipital lobe of cerebrum,

(4) Cerebellum, and

(5) Medulla oblongata.

Study the diagram and answer the following questions:

Mention one main function of each of the parts numbered, 1, 2, and 5.

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37. Give technical term to the following:

The point of contact between two neurons.

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38. Give technical term to the following:

Protective membranes covering the human brain and spinal cord.

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39. Give technical term to the following:

The inflammation of meninges.

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40. Classify the following actions as simple reflex or conditioned reflex :

Playing a guitar.

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41. Classify the following actions as simple reflex or conditioned reflex :

Removing your hand suddenly when pricked by a thorn.

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42. Classify the following actions as simple reflex or conditioned reflex :

Applying sudden brakes when a dog crosses the path.

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43. Classify the following actions as simple reflex or conditioned reflex :

Blinking of eyelids on exposure to light.

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44. Classify the following actions as simple reflex or conditioned reflex :

Tying one's shoe lace.

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45. State whether the following statements are true or false. If false, write the correct form of the statement by changing the first or last word only.

All voluntary actions are controlled by the cerebellum.

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46. State whether the following statements are true or false. If false, write the correct form of the statement by changing the first or last word only.

Dilation of pupil is brought about by the sympathetic nervous system.

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47. Choose the correct answer to the given statement from the four choices given below

the statement:

The cerebral hemispheres in mammals are connected by:

A. Corpus luteum

B. Hypothalamus

C. Pons

D. Corpus callosum.

Answer:

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48. Choose the correct answer to the given statement from the four choices given below the statement:

A point of contact between two neurons is termed as

A. Synapsis

B. Neuromotor junction

C. Synapse

D. None

Answer:

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49. Select the correct statement from the ones given below with respect to dihybrid cross

A. Receptor cell, sensory neuron, relaying neuron, effector muscles.

B. Receptor cell, efferent nerve, relaying neuron, muscles of the body.

C. Receptor cell, spinal cord, motor neuron, relaying neuron

D. Receptor cell, synapse, motor neuron, relaying neuron.

Answer:

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50. Choose the correct answer to the given statement from the four choices given below the statement:

Which one of the following is mainly

associated with the maintenance of the posture ?

A. Cerebrum

B. Cerebellum

C. Thalamus

D. Pons

Answer:

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51. Pick out the correct statement from the following

A. 31 pairs

B. 10 pairs

C. 21 pairs

D. 30 pairs

Answer:

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52. Draw a well labelled diagram of a myelinated Neuron showing the following parts: Perikaryon, Dendrites, Axon, Node of Ranvier and Myelin sheath.

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53. State the function of sensory neuron and a motor neuron.

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54. What is a nerve made-up of ?

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55. Select the odd one out w.r.t haemophilia

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56. During a street fight between two individuals, mention the effects on the following organs by the autonomous nervous

system, in the table given below : (one has been done for you as an example)

Organ	Sympathetic system	Parasympathetic system
e.g., Lungs	Dilates bronchi and bronchioles	Constricts bronchi and bronchioles
1. Heart		
2. Pupil of the eye		
3. Salivary gland		

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57. Draw a well labelled diagram of a 'Neuron' and name the following parts: Node of Ranvier

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58. Draw a well labelled diagram of a 'Neuron' and name the following parts: Nissl's granules

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59. Draw a well labelled diagram of a 'Neuron' and name the following parts: Cyton

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60. Complete the following:

Neurotransmitter : .....

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61. State the exact location of the following:

Corpus callosum

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62. State the exact location of the following:

Myelin sheath.

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63. State the exact location of the following:

Corpus callosum

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64. Give biological reasons for the following :

The fluid present between the layers of meninges.

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65. Give biological reasons for the following :

The change in an organism resulting due to stimulus.

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66. Give biological reasons for the following :

Injury to Medulla oblongata results in death.

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67. Give biological reasons for the following :

The hand automatically shows the direction to turn a cycle without thinking.

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68. What is the function of Cerebrospinal fluid ?

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69. Give biological reasons for the following :

Injury to Medulla oblongata results in death.

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70. Give specific/biological reasons for the following statements.

A person after consuming alcohol walks clumsily.

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71. The statement given below is incorrect. Rewrite the correct statement by changing the underlined words of the statement

Gyri and Sulci are the folds of Cerebellum.

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72. The statement given below is incorrect. Rewrite the correct statement by changing the underlined words of the statement

The outermost layer of Meninges is Pia mater.

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73. The statement given below is incorrect. Rewrite the correct statement by changing the underlined words of the statement

Maintaining balance of the body and coordinating muscular activities is carried by the cerebrum.

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74. The diagram given below is an external view of the human brain. Study the same and answer the questions that follow :

Name the parts labelled A, B and C in the diagram.

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75. The diagram given below is an external view of the human brain. Study the same and answer the questions that follow :

State the main functions of the parts labelled A and B.

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76. The diagram given below is an external view of the human brain. Study the same and answer the questions that follow :

What are the structural and functional units of the brain ? How are the parts of these units arranged in A and C ?

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77. The diagram given below is an external view of the human brain. Study the same and answer the questions that follow :

Mention the collective term for the membranes covering the brain.

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78. What is the function of Cerebrospinal fluid ?

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79. The diagram given below shows the internal structure of a spinal cord depicting a

phenomenon. Study the diagram and answer the questions:

Name the phenomenon that is depicted in the diagram. Define the phenomenon.

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80. The diagram given below shows the internal structure of a spinal cord depicting a phenomenon. Study the diagram and answer the questions:

Give the technical term for the point of contact between the two nerve cells.

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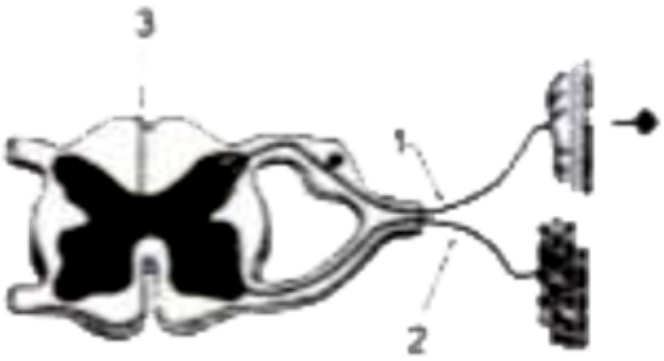
81. The diagram given below shows the internal structure of a spinal cord depicting a phenomenon. Study the diagram and answer the questions:



Name the parts numbered 1, 2 and 3.

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82. How does the arrangement of neurons in the spinal cord differ from that of the brain?

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83. Mention two ways by which the spinal cord is protected in our body.

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84. Match the items given in Column A with the most appropriate ones in Column B and rewrite the correct matching paris .

Column A	Column B
(*i*) Cretinism	(*a*) Hypersecretion of adrenal cortex
(*ii*) Diabetes insipidus	(*b*) Hyposecretion of thyroxine
(*iii*) Exophthalmic goitre	(*c*) Hyposecretion of growth hormone
(*iv*) Adrenal virilism	(*d*) Hyposecretion of vasopressin
(*v*) Dwarfism	(*e*) Hyposecretion of adrenal cortex
	(*f*) Hypersecretion of growth hormone
	(*g*) Hypersecretion of thyroxine

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85. Differentiate between : Cerebrum and Spinal cord (Arrangement of cytons and axons of neurons).

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Review Questions Complete The Following

1. Central nervous system consists of ..... and..... .

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2. ..... nerves carry impulses from receptors to CNS.

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3. Human brain weighs about .....gm.

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4. .....forms the largest part of the brain.

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5. Meninges around the brain from outer to inside are ....., ... and ..... .

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6. Spinal cord encloses a cavity called .....

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7. ..... is the afferent process of a neuron.

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8. Salivation of mouth on hearing the bell of lunch break is an example of .....

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9. Spinal and Cranial nerves

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10. Linings of cavities in brain and spinal cord are called ..... .

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11. The basic unit of the human brain is ..... .

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Review Questions Find The Odd One Out

1. Cerebrum, cerebellum, olfactory lobes and diencephalon.

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2. Superior colliculi, inferior colliculi, crura cerebri and corpus callosum.

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3. Cyton, dendrites, axon, Nissl's granules and synapse.

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4. Pons, cerebrum, medulla and cerebellum.

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5. Walking, eating, playing and sneezing.

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6. Coughing, hickups, breathing, heartbeat and peristalsis.

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7. Odd one out: Dilation of pupil, increase in heartbeat, increase in salivation and decreased peristalsis.

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8. Sneezing, coughing, typing, blinking.

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9. Lumen, muscular tissue, connective tissue, pericardium

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10. odd one out : Cyton, Photon, Axon, Dendron.

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