1.

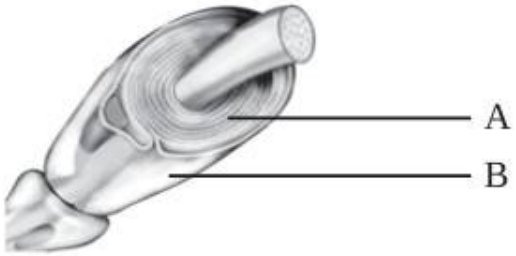
The flow chart given below indicates the transmission of impulse from one neuron to another. Complete the flow chart using the data given in the box.

Cell body, neurotransmitter, axon, synaptic nobe, axonite, dendron

Stimulus	→	Dendrite	→	A	→	B	→	C	→
→ D	→	E	→	F	→	Dendrite of the next neuron			

2.

Examine the picture given below.

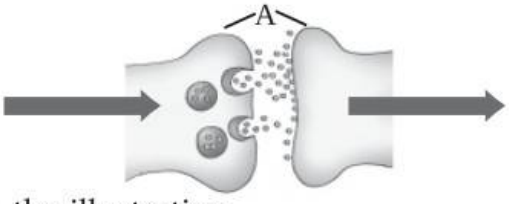


(a) Identify A and B.

(b) What is the role of A in the transmission of electric impulses?

3.

The illustration given below indicates the transmission of impulses from one neuron to another. Observe the illustration and answer the following question.



(a) Identify the part in the illustration.

(b) Identify the chemical substance which is secreted from A? Give one example for this chemical substance?

4.

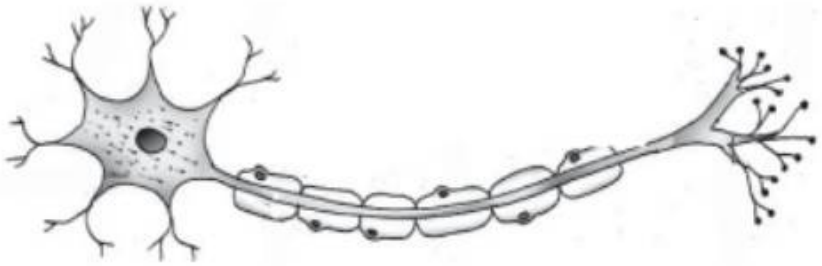
Mohan lost his memory and was partially paralysed after he met with an acccident.

(a) Which part of Mohan's brain was affected?

(b) How is the brain protected?

5.

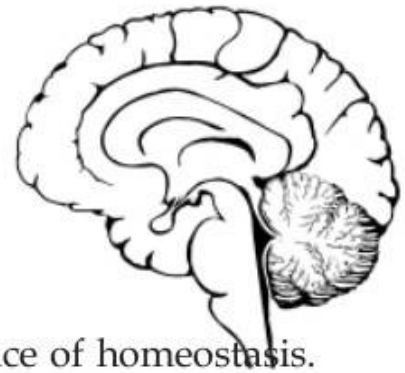
Draw the diagram and label the following parts.



a) The part which secretes acetylcholine.
b) The part which receives impulses from the adjacent neuron.
c) The part which carries impulses from the cell body to outside.

6.

Draw the diagram and label the following parts.



a) The part that helps in the maintenance of homeostasis.
b) That acts as relay station of impulses to and from the cerebrum.
c) The second largest part of the brain.

7.

Balu : In the spinal cord and the cerebrum, white matter is seen outside and greymatter is seen inside.

Ramu : In the cerebrum, the grey matter is seen outside and the white matter is seen inside, But in the spinal cord, the white matter is seen outside and the grey matter is seen inside.

In the group discussion related to the nervous system, Balu and Ramu said so.

a) Whose opinion do you agree with?
b) Explain white matter and grey matter?

8.

Box A and Box B contains the parts of the brain and related informations respectively. Analyse the informations in the boxes and complete the table as per the model cited.

A	B
Cerebellum Hypothalamus Medulla oblongata Thalamus	• Situated behind the cerebrum • Controls involuntary actions • Maintains equilibrium of the body • Located near the cerebellum as a rod-shaped structure • maintains homeostasis • situated just below the thalamus • Acts as relay station of impulses • Situated below the cerebrum

Part	Location	Function
Hypothalamus	Situated just below the thalamus.	Maintains homeostasis
Thalamus		

9.

Identify the word pair relationship and fill in the blanks:

i) Sensory nerve : Carries impulses to the spinal cord.
..... : Carries impulses from the brain to various parts of the body

ii) Skull : Brain
..... : Spinal cord

iii) Hypothalamus : Maintains homeostasis
..... : Control centre of involuntary actions.

v) Dendrite : Receives impulses
..... : Carries impulses outside

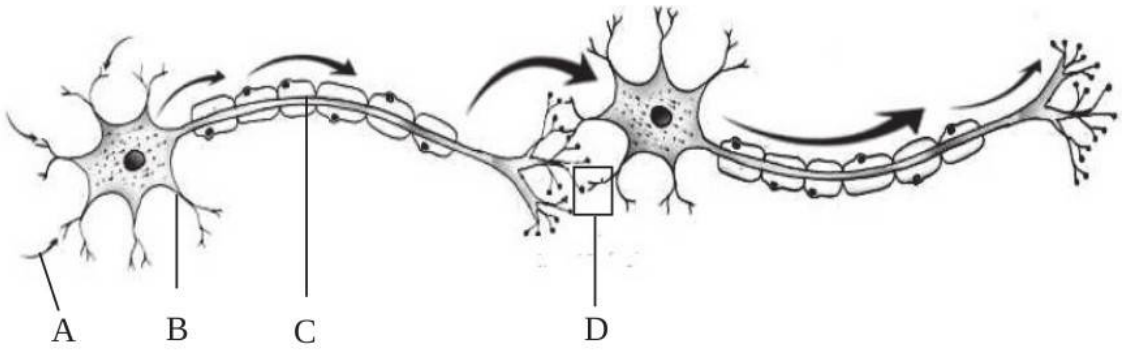
10.

Identify the parts of brain related to the following actions.

(a) Maintains the equilibrium of the body.	
(b) Controls breathing.	
(c) The three - layered membrane which helps in the protection of brain.	
(d) The Production centre of oxytocin and Vasopressin	
(e) Centre of thought, intelligence and memory.	

11.

Redraw the illustration and answer the questions given below.



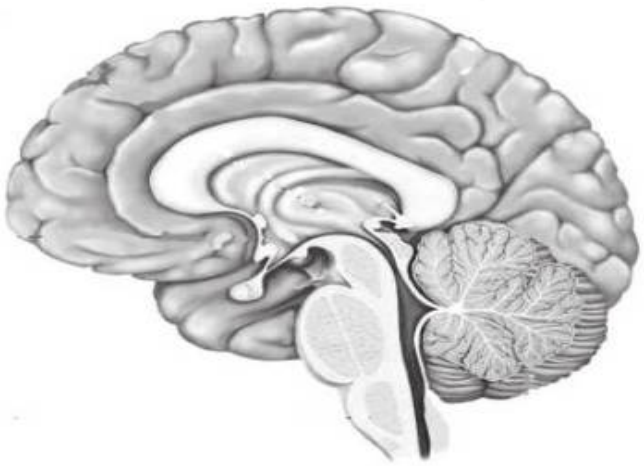
(a) Identify the parts A, B, C?

(b) Identify the part indicated by D? How impulses are transmitted through this part?

(c) Write the role of myelin sheath in the transmission of impulses?

12.

Redraw the picture, identify and label the parts which have the following functions.



(a) The part which controls involuntary actions.

(b) The part which coordinates muscular activities.

(c) The part which helps to feel senses.

(d) The part which acts as the relay station of impulses.

(e) The part which plays a major role in the maintenance of homeostasis.

13.

Write the different types of nerves and their functions like the example given below.

A.Mixed nerve	Carries impulses to and from the brain and spinal cord.
B.....	....
C.	....

14.

The symptoms of a disease that affecting nervous system is given below.

Loss of body balance, irregular movement of muscles, shivering of the body, profuse salivation.

(a) Identify the disease?

(b) Write the causes of the disease?

(c) Explain the other diseases that affecting nervous sysytem with their cause and symptoms?

15.

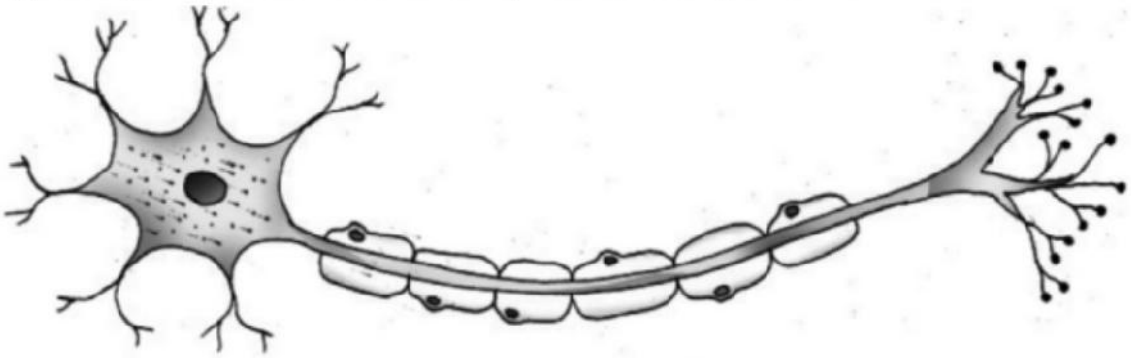
The following are the indications of some diseases affecting the nervous system. Analyze the symptoms and tabulate in A and B columns by giving the name of the disease as heading.

- Distruction of Ganglions.
- Distruction of neuron.
- Accumulation of an insoluble protein in the neural tissues.
- Decreased production of dopamine.
- Loss of body balance.
- Loss of memory.

A.....	B.....
• • •	• • •

16.

Copy the diagram and label the parts according to the indicators given below.



a) Part which receives impulses.

b) Part which carries impulses to the cell body.

c) Part which secretes neurotransmitters.

17.

Some parts of the central nervous system is given in the box. Arrange them suitably in the box provided.

Central canal, cerebrum, thalamus, hypothalamus, meninges, medulla oblongata.

Statement	Part
1. Part which controls involuntary actions.	1. .....
2. part which contain cerebrospinal fluid.	2. .....
3. Part which act as relay station of impulses.	3. .....
4. Largest part of the brain.	4. .....
5.Part which maintains homeostasis.	5. .....
6.Part which protects brain.	6. .....

18.

Copy the diagram and label the parts based on the indicators given below.

a) Part which coordinates muscular activities.

b) Rod shaped structure seen below the cerebrum.

c) Part which maintains homeostasis.

19.

The following are the indications of some diseases affecting the nervous system. Examine them and complete the table by giving the disease name as headings..

- Continuous and irregular flow of electric charges in the brain.
- Loss of body balance.
- Destruction of Ganglions.
- Loss of memory.
- Epilepsy due to continuous muscular contraction.
- Accumulation of an insoluble protein in the neural tissues.

A.....	B.....	C.....
• Loss of body balanance. •	• •	• Continuous and irregular flow of •

20.

The main symptoms of a disease affecting the nervous system are given below. Analyze the symptoms and answer the questions.

- Loss of body balance.
- Irregular movement of muscles.
- Profuse salivation.

a) Identify the disease.

b) Write the causes of this disease.

21.

Analyse the statements given tin the box , Give the name of the layers as heading and complete the table.

- Protects neuron from pressure ,shock etc..
- Increases the speed of impulses.
- Acts as electric insulator. .
- Layer which protects spinal chord.
- Contains three membranous layers.
- Layer which covers and protects the brain

.....	.....
• • •	• • •

22.

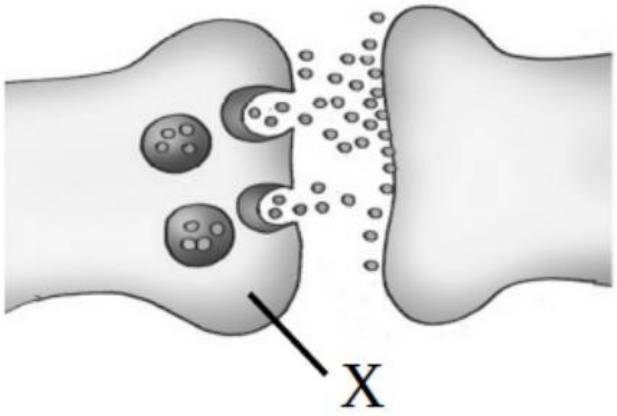
Identify the word pair relation ship and fill the blanks.

Myelin sheath : Covers and protects axon.

..... : Covers and protects brain

23.

Observe the following figure and answer the questions.



a) Name the part indicated by 'X'.

b) Write the name of the chemical released by this part and its function.

24.

Identify the parts of the nervous system with each of the following functions.

a) Plays a major role in the maintenance of homeostasis.

b) Acts as relay station of impulses

25.

Analyse the statements A and B and identify the suitable explanation from the following.

Statement A- Alzheimer's disease is due to the destruction of neurons.

Statement B- Accumulation of an insoluble protein in the neural tissues of the brain of Alzheimer's patient occurs.

i- Statements A and B are true and statement B is the cause of statement A.

ii- Statements A and B are incorrect.

iii- Statement A is correct and B is incorrect.

iv- Statements A and B are true, but statement B is not the cause of statement A.

26.

The following table includes the parts of brain and their functions. Identify the correct pair from them.

Parts of brain	Function
1) Cerebrum	i) Relay of impulses
2) Thalamus	ii) Maintenance of body equilibrium
3) Cerebellum	iii) Heart beat
4) Medulla oblongata	iv) Maintenance of homeostasis
	v) Sensory experiences

a) 1-i, 2-iii, 3-ii, 4-iv

b) 1-v, 2-i, 3-iv, 4- iii

c) 1-v, 2-ii, 3-ii, 4-i

d) 1-v, 2-i, 3- ii, 4- iii

27.

Define neurotransmitters .Give two examples of neurotransmitters?

What is the function of neurotransmitters.?

28.

How is the brain protected? .

29.

Analyse the table related to the parts of the brain and rearrange the column B in accordance with column A

A	B
The largest part of the brain	Thalamus
The second largest part of the brain.	Cerebrum
The rod shaped part is seen below the cerebrum, located near the cerebellum.	Cerebellum
The part situated just below the thalamus	Medulla oblongata
The part situated below the cerebrum	Hypothalamus

30.

complete the table related to nerves and their function

Nerves and their peculiarities	Functions
Sensory nerve (formed of sensory nerve fibres)	----------
Motor nerve (formed of motor nerve fibres)	carries impulses from brain and spinal cord to various parts of the body.
Mixed nerve (----------)	----------

31.

A fluid is seen in the brain which is formed from the blood and reabsorbed into the blood and write

a) Name the fluid b)What are the fnctions of this fluid?