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# BIOLOGY

## BOOKS - MTG BIOLOGY (HINGLISH)

## NEURAL CONTROL AND COORDINATION

### Neural Control And Coordination

**1.** In which animal, nerve cell is present but brain is absent ?

A. Sponge

B. Honeybee

C. Cockroach

D. Hydra

**Answer: D**

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**2.** Read the given statements and select the incorrect one.

A. In Hydra, all neurons are similar and join to form a nerve cell.

B. In earthworms, nervous system consists of a dorsal nerve cord, paired ganglia and segmental nerves.

C. Brain is present in insects.

D. Planaria has two nerve cords that join to form rudimentary brain.

**Answer: B**

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**3.** Neurons is sponges are

A. unipolar

B. bipolar

C. multipolar

D. absent

**Answer: D**

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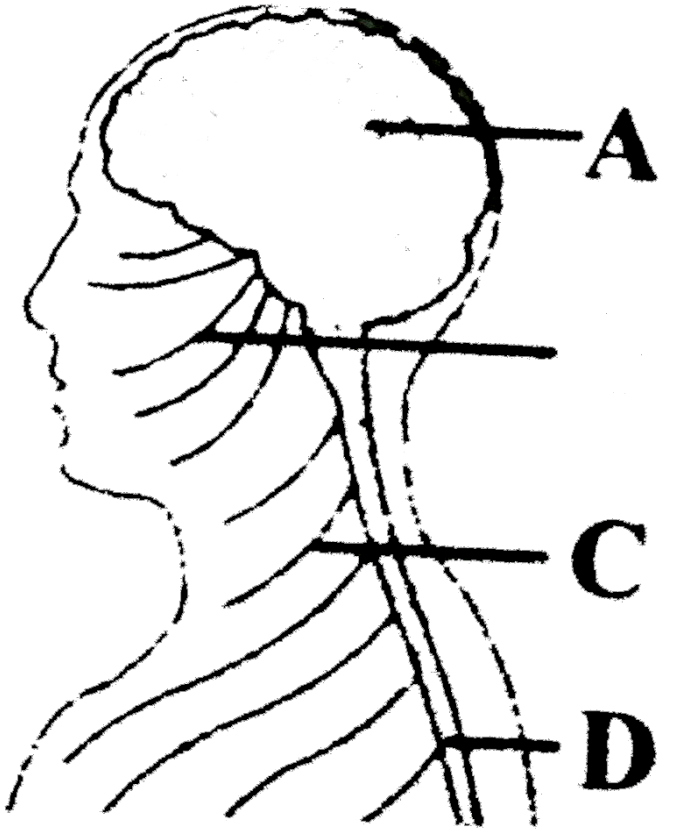
**4.** In the accompanying diagram of a part of the human body, the structures belonging to the central neutral system are labelled as

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A. A and C

B. B and C

C. A and D

D. C and D

**Answer: C**

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**5.** Afferent nerve fibre carries impulses from

A. effector to central neural system

B. receptor to central neural system

C. central neural system to muscle

D. central neural system to receptors.

**Answer: B**

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**6.** Skeletal muscles are controlled by

A. sympathetic nerves

B. parasympathetic nerves

C. somatic nerves

D. autonomic nerves

**Answer: C**

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**7.** In a human being, the number of cranial nerves is

A. 12 pairs

B. 6 pairs

C. 20 pairs

D. 10 pairs

**Answer: A**

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**8.** The $3^{rd}, 6^{th}$ and $11^{th}$ cranial nerves are respectively

A. oculomotor, abducens and accessory

B. oculomotor, trigeminal and accessory

C. optic, facial and accessory

D. trochlear, abducens and vagus.

**Answer: A**

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**9.** In a man, abducens nerve is injured. Which one of the following functions will be affected ?

A. Movement of the eyeball

B. Movement of the tongue

C. Swallowing

D. Movement of the neck

**Answer: A**

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**10.** Which one of the following transmits impulses to central neural system ?

A. Abducen nerve

B. Trochlear nerve

C. Oculomotor nerve

D. Auditory nerve

**Answer: D**

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**11.** The vagus nerve is the _____ cranial nerve.

A. $7^{th}$

B. $5^{th}$

C. $10^{th}$

D. $9^{th}$

**Answer: C**

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**12.** Which of the following nerves is purely a motor nerve ?

A. Vagus

B. Facial

C. Abducens

D. Trigeminal

**Answer: C**

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**13.** Which of the following cranial nerves of man is both sensory and motor ?

A. Olfactory

B. Optic

C. Vagus

D. Oculomotor

**Answer: C**

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**14.** Vagus nerve effects

A. voice production

B. peristalsis

C. respectory movements

D. all of these

**Answer: D**

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**15.** Injury to vagus nerve is humans is not likely to affect

A. tongue movements

B. gastrointestinal movements

C. breathing

D. cardiac movements

**Answer: A**

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**16.** Which of the following cranial nerves has the highest number of branches ?

A. Vagus nerve

B. Trigeminal nerve

C. Facial nerve

D. None of these

**Answer: A**

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**17.** How many pairs of cranial nerves are mixed nerves ?

A. 3

B. 5

C. 4

D. 6

**Answer: C**

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**18.** Hypoglossal nerve controls the movements of

A. ear

B. heart

C. tongue

D. limbs

**Answer: C**

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**19.** In a human being, the number of spinal nerves is

A. 31 pairs

B. 52 pairs

C. 12 pairs

D. 36 pairs

**Answer: A**

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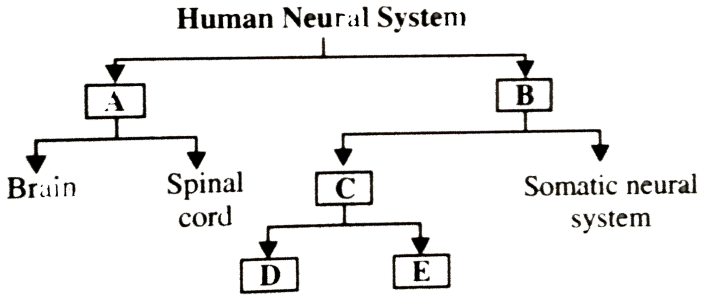
**20.** The flow chart given here shows functional organisation of the human neural system.Indentify A to E and select the correct options.




A.

| $A$ | $B$ | $C$ | $D$ | $E$ |
|---|---|---|---|---|
| $PNS$ | $CNS$ | $ANS$ | Sympathetic neural system | Parasympatheti |

B.

| $A$ | $B$ | $C$ | $D$ | $E$ |
|---|---|---|---|---|
| $ANS$ | $CNS$ | $PNS$ | Parasympathetic neural system | Sympatheti |

C.

| $A$ | $B$ | $C$ | $D$ | $E$ |
|---|---|---|---|---|
| $CNS$ | $PNS$ | $ANS$ | Sympathetic neural system | Parasympatheti |

D.

| $A$ | $B$ | $C$ | $D$ | $E$ |
|---|---|---|---|---|
| $ANS$ | $PNS$ | $CNS$ | Parasympathetic neural system | Sympatheti |

**Answer: C**

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**21.** One of the examples of the action of the autonomous neural system is

A. swallowing of food

B. pupillary reflex

C. peristalsis of the intestine

D. all of these

**Answer: D**

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**22.** Sympathetic neural system induces

A. secretion of digestive juices

B. heartbeat

C. secretion of saliva

D. all of these

**Answer: B**

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**23.** Which of the following options correctly idenifies the effect of sympathetic and parasympathetic neural system on given features or organs ?

A.

| Feature/organ | Sympathetic neural system | Parasympathetic neur |
|---|---|---|
| Salivary glands | Stimulates secretion | Inhibits secretion |

B.

| Feature/organ | Sympathetic neural system | Parasympathetic neur |
|---|---|---|
| Pupil of the eye | Dilates | Constricts |

C.

| Feature/organ | Sympathetic neural system | Parasympathetic neura |
|---|---|---|
| Heart rate | Decreases | Increases |

D.

| Feature/organ | Sympathetic neural system | Parasympatheti |
|---|---|---|
| Intestinal peristalsis | Stimulates | Inhibits |

**Answer: B**

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**24.** Which of the following pairs correctly identifies function of parasympathetic nervous system ?

A. Slows heartbeat, promotes pancreatic secretion

B. Increases secreation of sweat gland and intestinal gland

C. Accelerates heartbeat, dilates arteries

D. Raises blood pressure, increases peristaltic activity

**Answer: A**

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**25.** Visceral nervous system comprises of

A. nerve fibres

B. ganglia

C. plexuses

D. all of these

**Answer: B**

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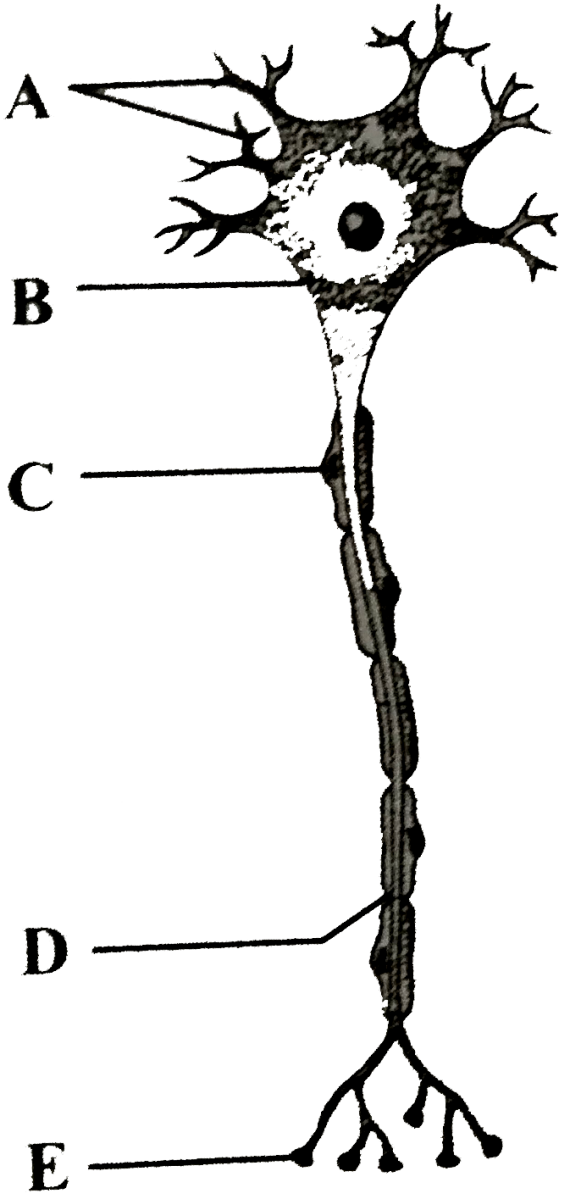
**26.** The given figure shows the structure of a neuron.Select the option that correctly identifies the parts labelled as A to E.



A.

| $A$ | $B$ | $C$ | $D$ | $E$ |
|---|---|---|---|---|
| Nerve fibres | Cyton | Schwann cell | Node of Ranvier | Synaptic knob |

B.

| $A$ | $B$ | $C$ | $D$ | $E$ |
|---|---|---|---|---|
| Dendrites | Cyton | Schwann cell | Node of Ranvier | Synaptic knob |

C.

| $A$ | $B$ | $C$ | $D$ | $E$ |
|---|---|---|---|---|
| Dendrites | Nerve cell | Schwann cell | Synaptic knob | Node of Ranvi |

D.

| $A$ | $B$ | $C$ | $D$ | $E$ |
|---|---|---|---|---|
| Axons | Cyton | Nerve cell | Node of Ranvier | Synaptic knob |

**Answer: B**

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**27.** Myelin sheath is formed by

A. Ranvier cells

B. muscle cells

C. Schwann cells

D. axon

**Answer: C**

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**28.** In a medullated nerve fibre, the conduction of impulse is faster due to the presence of

A. pericytes

B. endoneurium and epineurium

C. myelin sheath and nodes of Ranvier

D. Nissl's granules

**Answer: C**

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**29.** Read the given paragraph.

In the resting state, the axonal membrane is ___ with more ___ charged ions outside than inside.This unequal distribution of ions is due to (1) the selective permeability of the membrane, which forms an almost impenetrable barrier to _____ and (2) the action of the ____, which pumps _____ $Na^+$ out of the neuron for every ____ $K^+$ brought in.

Select the option that correctly fills the blanks in the paragraph.

A.

| $(i)$ | $(ii)$ | $(iii)$ | $(iv)$ | $(v)$ |
|---|---|---|---|---|
| depolarised | positively | $Na^+$ | sodium-potassium pump | three |

B.

| $(i)$ | $(ii)$ | $(iii)$ | $(iv)$ | $(v)$ |
|---|---|---|---|---|
| depolarised | negatively | $Na^+$ | sodium-potassium pump | three |

C.

| $(i)$ | $(ii)$ | $(iii)$ | $(iv)$ | $(v)$ | $(v$ |
|---|---|---|---|---|---|
| polarised | negatively | $Na^+$ | sodium-potassium pump | three | tw |

D.

| $(i)$ | $(ii)$ | $(iii)$ | $(iv)$ | $(v)$ | $(v$ |
|---|---|---|---|---|---|
| polarised | positively | $Na^+$ | sodium-potassium pump | three | tw |

**Answer: D**

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**30.** A nerve fibre during resting stage is

A. more permeable to $Na^+$

B. more permeable to $K^+$

C. equally permeable for $Na^+$ and $K^+$

D. less permeable to $K^+$

**Answer: B**

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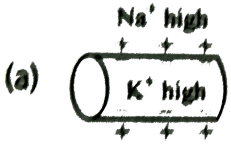
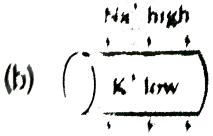
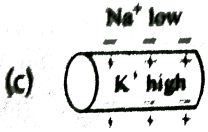
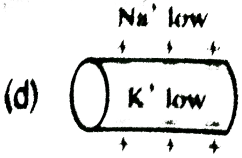
**31.** Which of the following options illustrates the distribution of $Na^+$ and $K^+$ ions in a section of non-myelinated axon which is at resting potentail ?

A. 


B. 


C. 


D. 


**Answer: A**

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**32.** Sodium-potassium pump transports

A. $Na^+$ and $K^+$ out of the neuron

B. $Na^+$ and $K^+$ into the neuron

C. $Na^+$ into the neuron and $K^+$ out of the neuron

D. $K^+$ into the neuron and $Na^+$ out of the neuron

**Answer: B**

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**33.** In the resting state of the neural membrane, diffusion due to concentration gradients, if allowed, would drive

A. $Ca^{2+}$ into the cell

B. $K^+$ and $Na^+$ out of the cell

C. $Na^+$ into the cell

D. $Na^+$ out of the cell

**Answer: D**

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**34.** Which of the following statements are correct regarding $Na^+ - K^+$ pump ?

(i)Needs energy (ATP) to work

(ii)Expels 3 $Na^+$ for every $2K^+$ ions imported

(iii)Works against a concentration gradient

(iv)Maintains resting potential

A. (i) and (iv)

B. (ii) and (iii)

C. (i) and (iii)

D. all of these

**Answer: B**

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**35.** The electrical potential diference between outside and inside of a nerve axon before excitation is known as

A. resting potential

B. action potential

C. spike potential

D. reaction potential

**Answer: A**

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**36.** A typical value of resting membrane potential is

A. $-100mV$

B. $-70mV$

C. $-40mV$

D. $-60mV$

**Answer: B**

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**37.** Complete the following paragraph by selecting the option that gives correct sequence of words.

When a stimulus is applied at a site on the polarised membrane, the membrane at that site becomes freely permeable to (i) ions.It causes rapid influx of (ii) leading to (iii) of the membrane.

A. $(i)$ $(ii)$ $(iii)$
$Na^+$ $K^+$ depolarisation

B. $(i)$ $(ii)$ $(iii)$
$K^+$ $K^+$ depolarisation

C. $(i)$ $(ii)$ $(iii)$
$K^+$ $Na^+$ depolarisation

D. $(i)$ $(ii)$ $(iii)$
$Na^+$ $Na^+$ depolarisation

**Answer: D**

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**38.** During depolarisation the outer surface of the membrane becomes

A. negatively charged

B. positively charged

C. neutrally charged

D. None of these

**Answer: A**

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**39.** Depolarisation of axolemma during nerve conduction takes place because

A. equal amount of $Na^+$ and $K^+$ move out across axolemma

B. only $Na^+$ move inside

C. more $Na^+$ moves outside than $K^+$ moving outside

D. None of these

**Answer: B**

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**40.** During the propagation of a nerve impulse, the action potential results from the movement of

A. $K^+$ ions from intracellular fluid to extracellular fluid

B. $Na^+$ ions from extracellular fluid to intracellular fluid

C. $K^+$ ions from extracellular fluid to intracellular fluid

D. $Na^+$ ions from intracellular fluid to extracellular fluid

**Answer: B**

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**41.** During the transmission of nerve impulse through a nerve fibre, the potential on the inner side of the plasma membrane has which type of electric charge ?

A. First positive, then negative and continue to be negative

B. First negative, then positive and continue to be positive

C. First positive, then negative and again back to positive

D. First negative, then positive and again back to negative

**Answer: D**

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**42.** Saltatory conduction of impulse occurs in

A. liver cells

B. non-myelinated nerve fibres

C. myelinated nerve fibres

D. None of these

**Answer: C**

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**43.** Read the given statements and select the correct ones.

(i)Autonomic neural system transmits impulses from the CNS to the voluntary organs and striated muscles of the body.

(ii)Unmyelinated nerve fibres do not have Schwann cells which form the myelin sheath.

(iii)Axonal membrane of a neuron while not conducting any impulse is comparatively more permeable to potassium ions $\left(K^{+}\right)$ than to sodium ions $\left(Na^{+}\right)$

(iv)A synapse is formed by the membranes of presynaptic neuron and a post synaptic neuron.

A. (i) and (iv)

B. (ii) and (iii)

C. (iii) and (iv)

D. (i) and (iv)

**Answer: C**

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**44.** The junction between the axon of one neuron and the dendrite of the next is called

A. constant bridge

B. junction point

C. joint

D. synapse

**Answer: D**

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**45.** Which of the following statements is/are incorrect about the electrical synapse ?

(i)At electrical synapses, the membranes of pre and post synaptic neurons are in very close proximity.

(ii)Electricity current can flow directly from one neuron into the other across the synapses.

(iii)Transmission of an inpulse across electrical synapses is very similar to impulse conduction along single axon.

(iv)Electrical synapses pass electrical signal between cells with the use of Ach.

(v)Electrical synapses are fast.

(vi)Electrical synapses are rare in our system.

A. (ii),(iv) and (v)

B. (i) and (iii)

C. (iv) only

D. (i),(v) and (vi)

**Answer: C**

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**46.** Nerve fibres transmit the nerve message by _____means.

A. chemical

B. physical

C. electrochemical

D. electrical

**Answer: C**

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**47.** A list of events occurring in the transmission of nerve impulse across the synapse is given below in a random order

(i)Opening of specific ion channels allows the entry of ions, a new action potential is generated in the post-synaptic neuron.

(ii)Neurotransmitter binds to the receptor on post synaptic membrane.

(iii)Synaptic vesicle fuses with pre-synaptic membrane, neurotransmitter release into synaptic cleft.

(iv)Depolarisation of pre-synaptic membrane.

(v)Arrival of action potential at axon terminal.

Which of the following options represents these events in a correct order ?

A. $(v) \rightarrow (iv) \rightarrow (iii) \rightarrow (ii) \rightarrow (i)$

B. $(i) \rightarrow (ii) \rightarrow (iii) \rightarrow (iv) \rightarrow (v)$

C. $(i) \rightarrow (ii) \rightarrow (iv) \rightarrow (iii) \rightarrow (v)$

D. $(v) \rightarrow (iv) \rightarrow (iii) \rightarrow (i) \rightarrow (ii)$

**Answer: A**

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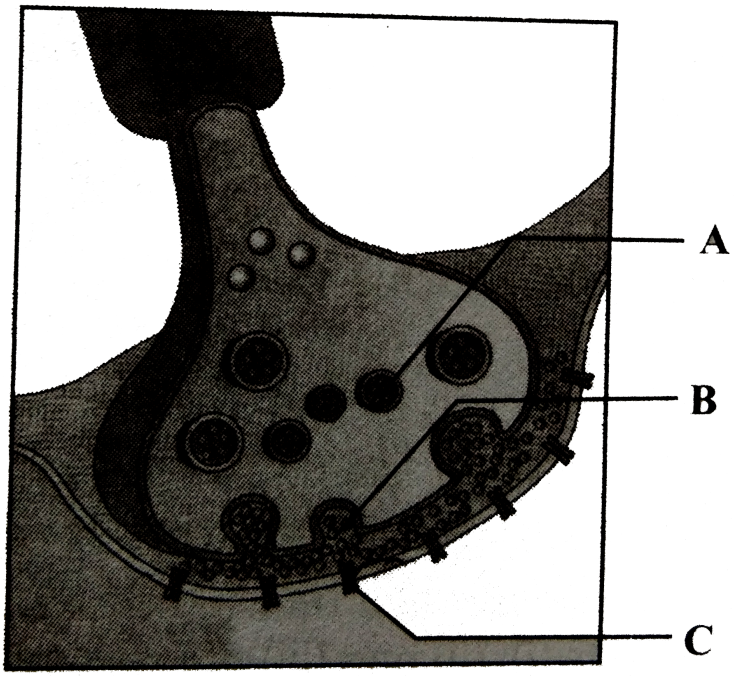
**48.** The given diagram shows axon terminal.Select the option that correctly matches the steps in transmission of impulses (list i-vii) with the labellings (A-C) in diagram.




(i)Chemicals called neurotransmitters are released in the synaptic cleft through ion channels.

(ii)When an impulse arrives at the axon terminal, it stimulates the movement of synaptic vesicles.

(iii)Neurotransmitters are endocytosed into the neurons.

(iv)The ions channels close with the binding of neurotransmitters to their specific receptors vesicles.

(v)Synaptic vesicles move towards the membrane where they fuse with the plasma membrane.

(vi)Neurotransmitters are released in the synaptic cleft.

(vii)The released transmitters bind to their specific receptors on post-synaptic membrane

A. $\begin{matrix} A & B & C \\ (ii) & (iii) & (i) \end{matrix}$

B. $\begin{matrix} A & B & C \\ (v) & (vi) & (iv) \end{matrix}$

C. $\begin{matrix} A & B & C \\ (ii) & (vi) & (vii) \end{matrix}$

D. $\begin{matrix} A & B & C \\ (v) & (iii) & (iv) \end{matrix}$

**Answer: C**

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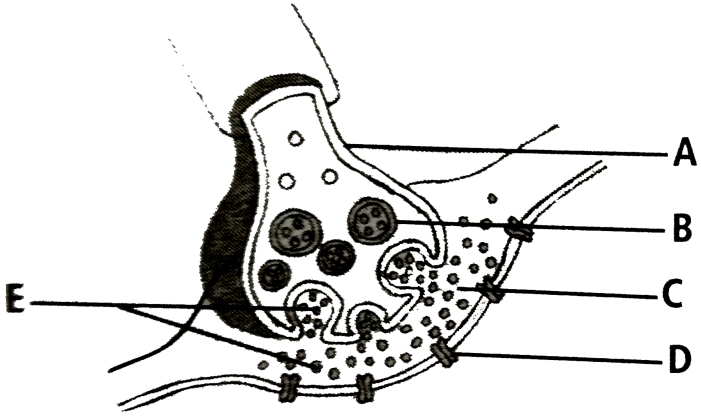
**49.** The given diagram shows axon terminal and synapse. Here A,B,C,D and E respectively represent




A. Axon terminal, Synaptic cleft, Synaptic versicles, Neurotransmitters and Receptors

B. Axon terminal, Synaptic vesicles, Synaptic cleft, Receptors and Neurotransmitters

C. Synaptic cleft, Synaptic vesicles, Axon terminal, Neurotransmitters and Receptors

D. Synaptic cleft, Axon terminal, Synaptic vesicles, Neurotransmitters and Receptors

**Answer: B**

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**50.** Which one of the following does not act as a neurotransmitter ?

A. Cortisone

B. Acetylcholine

C. Dopamine

D. Norepinephrine

**Answer: A**

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**51.** Read the given statements and select the correct option.

(i)Synaptic cleft of neurons secreates adrenaline.

(ii)Myelinated nerve fibres are enveloped with Schwann cells, which form a myelin sheath around the axon.

(iii)Non-myelinated nerve fibre is enclosed by a Schwann cell that does

not form a myelin sheath.

(iv)Spinal and cranial nerves are made of non-myelinated nerve fibres.

A. Statements (i) and (ii) are correct but statements (iii) and (iv) are incorrect.

B. Statements (i), (ii) and (iii) are correct but statement (iv) is incorrect.

C. Statements (iii) and (iv) are correct but statements (i) and (ii) are incorrect.

D. Statement (ii) and (iii) are correct but statements (i) and (iv) are incorrect.

**Answer: D**

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**52.** Unidirectional transmission of a nerve impulse through nerve fibre is due to the fact that

A. nerve fibre is insulated by a medullary sheath

B. sodium pump starts operating only at the cyton and then continues into the nerve fibre

C. neurotransmitters are released by dendrites and not by axon endings

D. neurotransmitters are released by the axon endings and not by dendrites.

**Answer: D**

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**53.** Which of the following options correctly describes the sequence of structures present between a receptor and an effector when D refers dendrite, A refers axon, S refers synapse and CB refers to cell body ?

A. D-CB-A-S-D-CB-A

B. A-D-CB-S-A-D-CB

C. D-CB-A-S-A-CB-D

D. D-A-S-CB-D-A-CB

**Answer: A**

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**54.** Brain depends on blood for the supply of

A. ATP and glucose

B. oxygen and ATP

C. oxygen and glucose

D. oxyen and electrolytes

**Answer: C**

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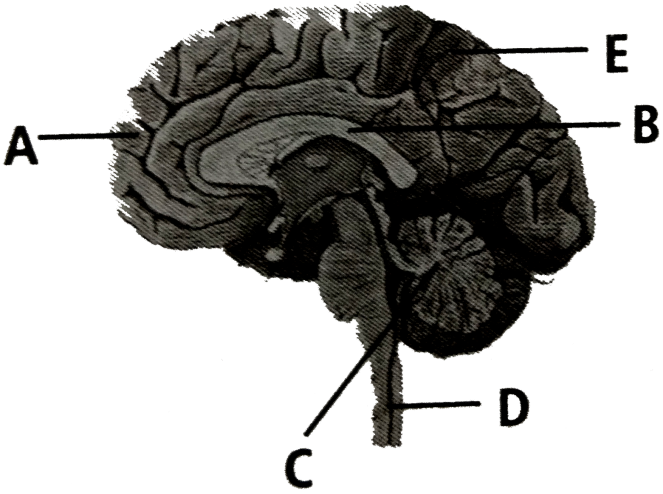
**55.** The given figure shows lateral view of the human brain.Identify the parts labelled as A to E and select the correct option.




A.

| $A$ | $B$ | $C$ | $D$ | $E$ |
|---|---|---|---|---|
| Temporal lobe | Corpus callosum | Cerebrum | Medulla oblongata | F |

B.

| $A$ | $B$ | $C$ | $D$ | $E$ |
|---|---|---|---|---|
| Frontal lobe | Thalamus | Cerebrum | Medulla oblongata | Occipital |

C.

| $A$ | $B$ | $C$ | $D$ | $E$ |
|---|---|---|---|---|
| Temporal lobe | Pons | Cerebrum | Medulla oblongata | Frontal lobe |

D.

| $A$ | $B$ | $C$ | $D$ | $E$ |
|---|---|---|---|---|
| Frontal lobe | Corpus callosum | Cerebellum | Medulla oblongata | Pa |

**Answer: D**

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**56.** The correct sequence of meanings from inner to outer side is

A. duramater $\rightarrow$ arachnoid membrane $\rightarrow$ piamater

B. duramater $\rightarrow$ piamater $\rightarrow$ arachnoid membrane

C. piamater $\rightarrow$ arachnoid membrane $\rightarrow$ duramater

D. arachnoid membrane $\rightarrow$ duramater $\rightarrow$ piamater

**Answer: C**

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**57.** What is the space between arachnoid and piameter called ?

A. Supra-arachnoid space

B. Sub-arachnoid space

C. Subdural space

D. Meninges

**Answer: B**

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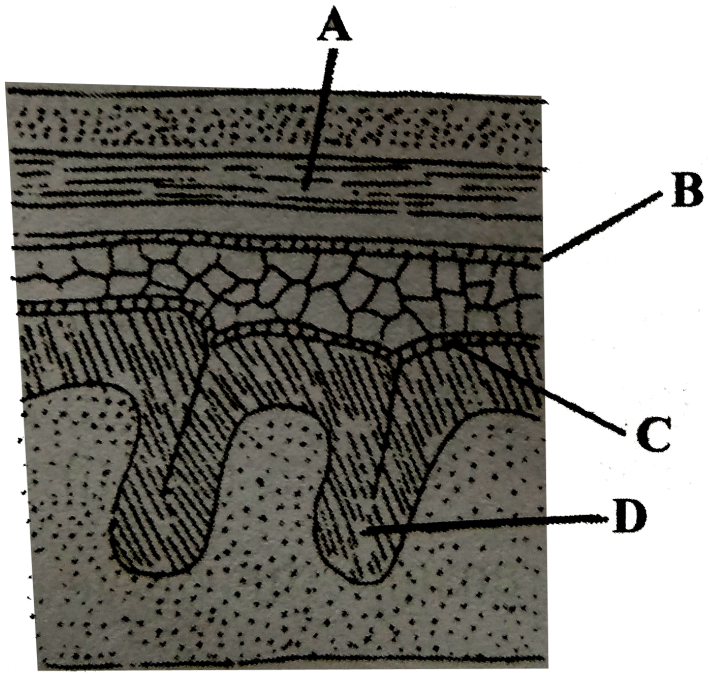
**58.** The given figure shows a section of brain. Identify the parts labelled as A,B,C and D and match them with the names (i-vii) given below.

(i)Arachnoid membrane , (ii)Subdural space , (iii)Duramater , (iv)Bone ,

(v)White matter , (vi)Grey matter , (vii)Piamater




A. $\begin{matrix} A & B & C & D \\ (iii) & (ii) & (vi) & (v) \end{matrix}$

B. $\begin{matrix} A & B & C & D \\ (i) & (ii) & (iii) & (vi) \end{matrix}$

C. $\begin{matrix} A & B & C & D \\ (iii) & (i) & (vii) & (vi) \end{matrix}$

D. $\begin{matrix} A & B & C & D \\ (iv) & (vii) & (i) & (ii) \end{matrix}$

**Answer: C**

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**59.** Corpus callosum connects two

A. cerebral hemispheres

B. venticles of brain

C. cerebellar hemispheres

D. optic thalamus

**Answer: A**

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**60.** A touch on the right hand stimulates neurons in the

A. left somatic sensory area

B. left occipital lobe

C. right somatic sensory area

D. right occipital lobe

**Answer: A**

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**61.** Read the following five statements (i) to (v) regarding left cerebral hemisphere and select the option that correctly states the true (T) and false (F) statements.

(i)It receives most modalities of sensory information from the right side of the body.

(ii)It is usually larger than the right cerebral hemisphere.

(iii)It is the dominant cerebral hemisphere in most individuals.

(iv)It is connected to the right cerebral hemisphere by the corpus callosum.

(v)It contains the main areas for the understanding and production of speech in most individuals.

A. $\begin{matrix}(\mathrm{i}) & (\mathrm{ii}) & (\mathrm{ii}) & (\mathrm{iv}) & (\mathrm{v}) \\ T & T & F & F & F\end{matrix}$

B. $\begin{matrix}(\mathrm{i}) & (\mathrm{ii}) & (\mathrm{ii}) & (\mathrm{iv}) & (\mathrm{v}) \\ F & T & T & F & T\end{matrix}$

C. $\begin{matrix}(\mathrm{i}) & (\mathrm{ii}) & (\mathrm{ii}) & (\mathrm{iv}) & (\mathrm{v}) \\ T & F & T & T & T\end{matrix}$

D. $\begin{matrix}(\mathrm{i}) & (\mathrm{ii}) & (\mathrm{ii}) & (\mathrm{iv}) & (\mathrm{v}) \\ F & F & T & T & T\end{matrix}$

**Answer: C**

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**62.** The primary visual area is located in

A. temporal lobe

B. occipital lobe

C. frontal lobe

D. parietal lobe

**Answer: B**

Watch Video Solution

**63.** Which of the following structures is found in diencephalon ?

A. Pons

B. Basal ganglia

C. Corpora quadrigemina

D. Hypothalamus

**Answer: D**

Watch Video Solution

**64.** The Broca's area and Wernicke's centre are the association areas situated in cerebrum.These are associated with

A. breathing

B. blind spot

C. memory

D. None of these

**Answer: D**

Watch Video Solution

**65.** All sensory information to be registered consciously by the forebrain must via the

A. thalamus

B. reticular activating system

C. cerebellum

D. pons

**Answer: A**

Watch Video Solution

**66.** Human body temperature is maintained by

A. hypothalamus

B. medulla oblongata

C. pituitary

D. cerebral cortex

**Answer: A**

Watch Video Solution

**67.** Satiety centres of brain are present in

A. cerebral hemispheres

B. hypothalamus

C. cerebellum

D. medulla oblongata

**Answer: B**

Watch Video Solution

**68.** Which part of the human brain controls the urge for eating and drinking ?

A. Forebrain

B. Midbrain

C. Hindbrain

D. Spinal cord

**Answer: B**

Watch Video Solution

**69.** Broca's area in human brain controls

A. speech

B. taste

C. respiration

D. heartbeat

**Answer: A**

Watch Video Solution

**70.** Sense of smell is perceived by

A. occipital lobe

B. temporal lobe

C. olfactory lobe

D. parietal lobe

**Answer: A**

Watch Video Solution

**71.** Anterior choroid plexus is present on the

A. floor of diencephalon

B. cerebral hemispheres

C. roof of diencephalon

D. roof of medulla oblongata

**Answer: C**

Watch Video Solution

**72.** Comprehension of spoken and written words take place in the region of

A. association area

B. motor area

C. Wernicke's area

D. Broca's area

**Answer: C**

Watch Video Solution

**73.** Which function will be lost if occipital lobe is damaged ?

A. Hearing

B. Speech

C. Vision

D. Memory

**Answer: C**

Watch Video Solution

**74.** Which of the following is a part of our brain ?

A. Corpora allata

B. Corpora adiposa

C. Corpora caradiaca

D. Corpora quadrigemina

**Answer: D**

Watch Video Solution

**75.** The optic lobes in humans are represented by the corpora

A. bigemina

B. arenacea

C. striata

D. quadrigemina

**Answer: D**

Watch Video Solution

**76.** Pons' connects the

A. two cerebral hemispheres

B. two lobes of cerebellum

C. cerebrum and cerebellum

D. spinal cord with the brain

**Answer: B**

Watch Video Solution

**77.** Cerebellum of brain is concerned with

A. controlling rapid muscular activites

B. learning in early stages

C. maintaining posture, orientation and equilibrium of body

D. all of these

**Answer: D**

Watch Video Solution

**78.** Tree of life is

A. branchial tree

B. lymphatic system

C. arbor vitae

D. loop of henle.

**Answer: C**

Watch Video Solution

**79.** Match column I with column II and select the correct option from the codes given below.

| Column I | Column II |
|---|---|
| $A$. Cerebrum | $(i)$Controls the pituitary |
| $B$. Cerebellum | $(ii)$Controls vision and hearing |
| $C$. Hypothalamus | $(iii)$Controls the rate of heart beat |
| $D$. Midbrain | $(iv)$Seat of intelligence |
| | $(v)$Maintains body posture |

A. A-(v), B-(iv), C-(ii),D-(iii)

B. A-(iv), B-(v), C-(ii),D-(i)

C. A-(v), B-(iv), C-(i),D-(iii)

D. A-(iv), B-(v), C-(i),D-(ii)

**Answer: D**

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**80.** Which of the following statements is correct regarding cerebellum ?

A. It is a part of hindbrain

B. It consists of two cerebellar hemisphere and a vermis

C. Arbor vitae is present in cerebellum

D. all of these

**Answer: D**

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**81.** The part of human hindbrain that is responsible for hand-eye coordination is

A. cerebellum

B. pons varolii

C. medulla oblongata

D. thalamus

**Answer: A**

Watch Video Solution

**82.** The respiratory and cardiac centres are located in

A. cerebrum

B. diencephalon

C. crura cerebri

D. medulla oblongata

**Answer: B**

Watch Video Solution

**83.** Salivation in mammals is under the control of

A. medulla oblongata

B. mesencephalon

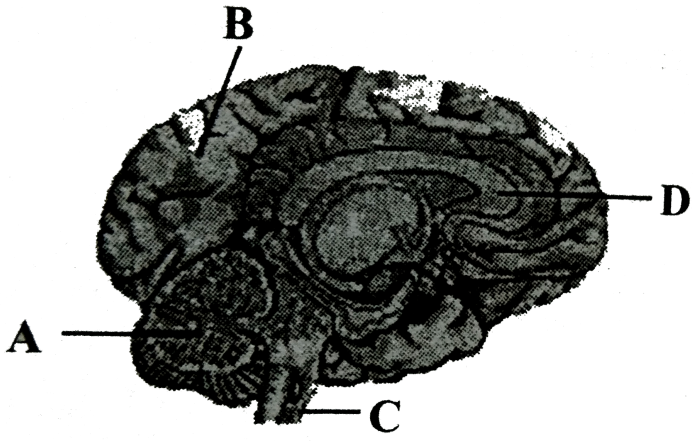
C. hypothalamus

D. cerebellum

**Answer: A**

Watch Video Solution

**84.** Which labelled part controls the process of breathing ?




A. A

B. B

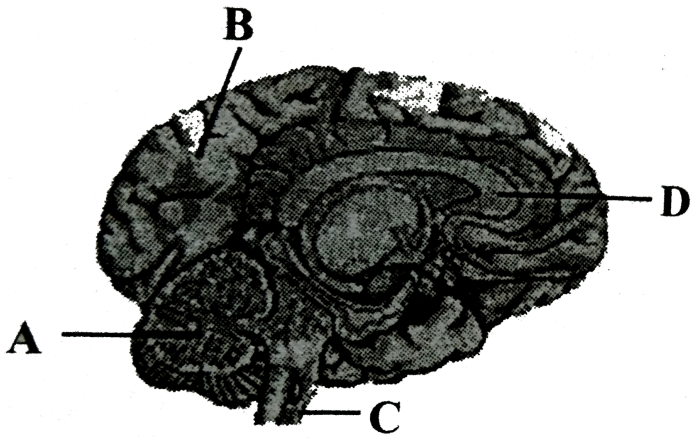
C. C

D. D

**Answer: C**

Watch Video Solution

**85.** Which of the following functions is performed by the part labelled 'C' in the given figure ?




A. Regulation of body temperature

B. Regulation of gastric secretions

C. Learning

D. Maintaining posture

**Answer: B**

Watch Video Solution

**86.** Which of the following parts of brain constitute the brain stem ?

A. Midbrain and hindbrain

B. Hindbrain and forebrain

C. Forebrain and midbrain

D. Forebrain only

**Answer: A**

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**87.** Cell bodies of neurons bringing afferent information into the spinal cord are located in

A. dorsal root ganglia

B. ventral root ganglia

C. grey matter of the spinal cord

D. white matter of the spinal cord

**Answer: A**

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**88.** Which of the following has H-shaped grey matter ?

A. Cerebrum

B. medulla oblongata

C. cerebellum

D. Spinal cord

**Answer: D**

Watch Video Solution

**89.** What is the correct path of a reflex arc ?

A. Sensory stimulus $\rightarrow$ Dendrite $\rightarrow$ Axon

B. Motor nerves $\rightarrow$ Acetylcholine $\rightarrow$ Adjustor neuron

C. Efferent nerves $\rightarrow$ Connector nerves $\rightarrow$ Motor nerves

D. Afferent nerves $\rightarrow$ Efferent nerves $\rightarrow$ Connector nerves

**Answer: A**

Watch Video Solution

**90.** For good reflex actions we require intact

A. spinal cord

B. medulla oblongata

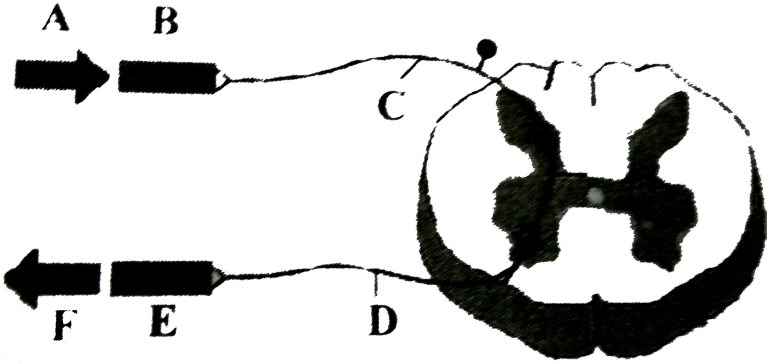
C. hypothalamus

D. cerebellum

**Answer: A**

Watch Video Solution

**91.** The path of reflex arc is shown in the given figure.Identify the different labellings A,B,C,D,E,F and select the correct option.




A.

| $A$ | $B$ | $C$ | $D$ | $E$ | $F$ |
|---|---|---|---|---|---|
| Stimulus | Effector | Sensory nerve | Motor nerve | Receptor | Resp |

B.

| $A$ | $B$ | $C$ | $D$ | $E$ | $F$ |
|---|---|---|---|---|---|
| Stimulus | Receptor | Sensory nerve | Motor nerve | Effector | Resp |

C.

| $A$ | $B$ | $C$ | $D$ | $E$ | $F$ |
|---|---|---|---|---|---|
| Stimulus | Effector | Motor nerve | Sensory nerve | Receptor | Resp |

D.

| $A$ | $B$ | $C$ | $D$ | $E$ | $F$ |
|---|---|---|---|---|---|
| Stimulus | Receptor | Motor nerve | Sensory nerve | Effector | Resp |

**Answer: B**

Watch Video Solution

**92.** Which of the following is an example of conditioned reflex ?

A. Hand withdraws when pierced with a needle

B. Eyes close, when anything enters into them

C. During digestion, food goes forward in alimentary canal

D. Trained dog salivates when you ring a bell

**Answer: D**

Watch Video Solution

**93.** Which of the following is not a relfex action ?

A. Salivation

B. Sweating

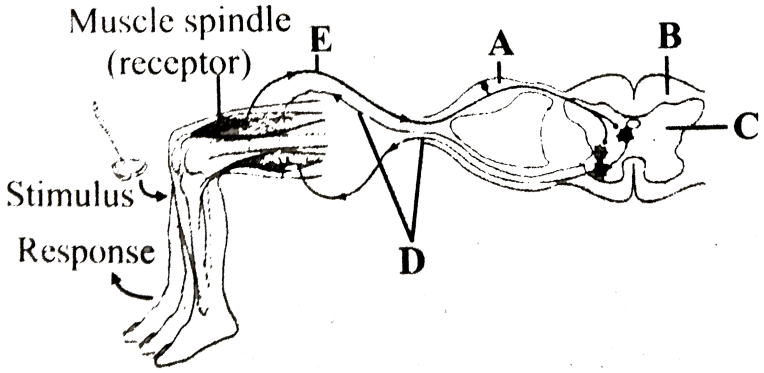
C. Withdrawal of hand when pinched by needle

D. None of these

**Answer: B**

Watch Video Solution

**94.** The given diagrammatic representation of reflex action shows knee jerk reflex.




Identify the parts labelled as A to E and select the correct option.

A.

| $A$ | $B$ | $C$ | $D$ |
|---|---|---|---|
| Dorsal root ganglion | White matter | Grey matter | Afferent pathwa |

B.

| $A$ | $B$ | $C$ | $D$ |
|---|---|---|---|
| Dorsal root ganglion | White matter | Grey matter | Efferent pathwa |

C.

| $A$ | $B$ | $C$ | $D$ |
|---|---|---|---|
| Ventral root ganglion | Grey matter | White matter | Efferent pathw |

D.

| $A$ | $B$ | $C$ | $D$ |
|---|---|---|---|
| Ventral root ganglion | White matter | Grey matter | Efferent pathw |

**Answer: B**

Watch Video Solution

**95.** Olfactory receptors are present in

A. eye

B. nose

C. ear

D. skin

**Answer: B**

Watch Video Solution

**96.** Taste buds contain

A. gustatory receptors

B. olfactory receptors

C. photoreceptors

D. phonoreceptors

**Answer: A**

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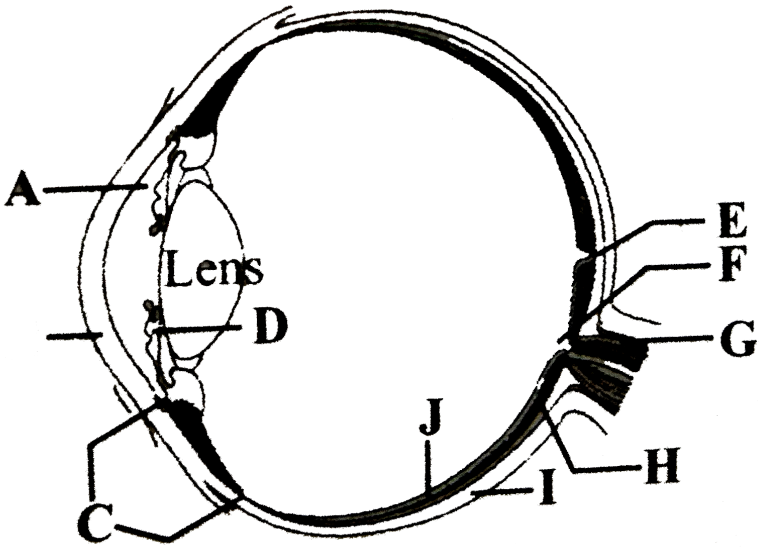
**97.** Refer to the given diagram. Match the labelled parts (A-J) with their functions and select the correct options.

(i)Carries nerve signals to the brain

(ii)Regulates the size of the pupil to let more or less light into the eye

(iii)Changes the shape of the lens

(iv)Photoreceptors are concentrated at this point




A. (i)-B, (ii)-D, (iii)-F, (iv)-H

B. (i)-J, (ii)-G, (iii)-I, (iv)-C

C. (i)-A, (ii)-C, (iii)-E, (iv)-G

D. (i)-G, (ii)-D, (iii)-C, (iv)-E

**Answer: B**

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**98.** Match column I with column II and select the correct option from the codes given below.

| Column-I | Column-II |
|---|---|
| $A$. Cornea | $(i)$Provides opening for light to enter |
| $B$. Iris | $(ii)$Transduces blue,green and red light |
| $C$. Lens | $(iii)$Controls the amount of light that enters |
| $D$. Optic nerves | $(iv)$Alters the shape of lens |
| $E$. Pupil | $(v)$Transmit information to the CNS |
| $F$. Ciliary muscles | $(vi)$Focus light directly on retina |
| $G$. Fovea | $(vii)$Bends light and protects inner eye |

A. A-(vii), B-(iii), C-(vi),D-(v), E-(i), F-(iv), G-(ii)

B. A-(i), B-(ii), C-(iii),D-(iv), E-(v), F-(vi), G-(vii)

C. A-(vii), B-(vi), C-(v),D-(iv), E-(iii), F-(ii), G-(i)

D. A-(vii), B-(iv), C-(vi),D-(v), E-(i), F-(iii), G-(ii)

**Answer: A**

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**99.** Cornea transplant in humans is almost never rejected.This is because

A. it is composed of enucleated cells

B. it is a non-living layer

C. its cells are least penetrable by bacteria

D. it has no blood supply.

**Answer: D**

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**100.** Cornea is covered externally by a thin transparent membrane which is called

A. sclerotic

B. conjunctiva

C. choroid

D. None of these

**Answer: B**

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**101.** The innermost layer of the human eye is

A. choroid

B. cornea

C. sclera

D. retina

**Answer: D**

Watch Video Solution

**102.** The black pigment in the eye, which reduces the internal reflection, is located in

A. retina

B. iris

C. sclerotic

D. cornea

**Answer: A**

Watch Video Solution

**103.** The shape of eye lens is changed by

A. pupil

B. iris

C. optic nerve

D. ciliary muscle

**Answer: D**

Watch Video Solution

**104.** The size of pupil is controlled by the

A. ciliary muscles

B. suspensory ligaments

C. cornea

D. iris muscles

**Answer: D**

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**105.** Why is it difficult to differentiate between red and green colour objects in dark or in night ?

A. Rods work well only during daytime

B. Cones work well only during daytime

C. Rods work well only during night time

D. Cones work well only during night time

**Answer: B**

Watch Video Solution

**106.** Which of the following cells are associated with identification of colours in bright light ?

A. Cone cellls

B. Rods cells

C. Lacrimal cells

D. Cells of Muller

**Answer: A**

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**107.** In the chemistry of vision in mammals, the photosensitive substance is called

A. rhodopsin

B. melanin

C. sclerotin

D. retinol

**Answer: A**

Watch Video Solution

**108.** Which one of the following is the correct difference between rod cells and cone cells of our retina ?

A.

| Rod cells | Cone cells |
| --- | --- |
| Vision in poor light | Colour vision and detailed vision in bright light |

B.

| Rod cells | Cone cells |
| --- | --- |
| More concentrated in centre of retina | Evenly distributed all over ret |

C.

| Rod cells | Cone cells |
| --- | --- |
| Low in number | High in number |

D.

| Rod cells | Cone cells |
| --- | --- |
| lodopsin | Rhodopsin |

**Answer: A**

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**109.** The point in eye of mammals from which optic nerves and blood vessels leave the eye ball is called

A. yellow spot

B. blind spot

C. pars optica

D. green spot

**Answer: B**

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**110.** Blind spont in vertebrate eye is the place where

A. there are no cones

B. there are no rods

C. there are neither rods nor cones

D. retina is absent

**Answer: C**

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**111.** The depression in the retina of eye which lodges only the cones is called

A. blind spot

B. fovea centralis

C. fenestra rotunda

D. red nuclei

**Answer: B**

Watch Video Solution

**112.** Retina is most sensitive at

A. macula lutea

B. optic disc

C. fovea centrailis

D. periphery

**Answer: C**

Watch Video Solution

**113.** The fluid filled in the space between lens and cornea is termed as

A. vitreous humour

B. aqueous humour

C. synovial fluid

D. CSF

**Answer: B**

Watch Video Solution

**114.** A list of steps involved in mechanism of vision is given below in a random order.

(i)Neural impulses are analysed and image formed on retina is recognised

by visual cortex.

(ii)Membrane permeability changes

(iii)Ganglion cells are excited

(iv)Bipolar cells are depolarised

(v)Action potentials (impulse) are transmitted by optic nerves to visual cortex.

(vi)Potential differences are generated in the photoreceptor cells.

(vii)Light energy causes a change in shape of rhodopsin, leading to the dissociation of retina (an aldehyde of vitamin A ) from opsin (a protein)

(viii)Structure of opsin is changed.

Which of the following options represents these events in a correct order ?

A. (i),(ii),(iii),(iv),(v),(vi),(vii),(viii)

B. (viii),(vii),(vi),(v),(iv),(iii),(ii),(i)

C. (i),(iv),(iii),(ii),(vii),(viii),(vi),(v)

D. (vii),(viii),(ii),(vi),(iv),(iii),(v),(i)

**Answer: D**

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**115.** Path taken in the eye ball by light rays is

A. cornea $\rightarrow$ conjunctiva $\rightarrow$ aqueous humour $\rightarrow$ lens (through pupil) $\rightarrow$ vitreous humous $\rightarrow$ retina

B. conjunctiva $\rightarrow$ cornea $\rightarrow$ lens (through pupil) $\rightarrow$ aqueous humour $\rightarrow$ viteous humour $\rightarrow$ retina

C. conjunctiva $\rightarrow$ cornea $\rightarrow$ vitreous humour $\rightarrow$ lens (through pupil) $\rightarrow$ aqueous humour $\rightarrow$ retina

D. conjunctiva $\rightarrow$ cornea $\rightarrow$ aqueous humour $\rightarrow$ lens (through pupil) $\rightarrow$ vitreous humour $\rightarrow$ retina

**Answer: D**

Watch Video Solution

**116.** The light stricking the retina generates nerve impulse.Which of the following options correctly describes the path of light ?

A. Photosensory cells $\rightarrow$ Bipolar neurons $\rightarrow$ Ganglionic cells $\rightarrow$ Sensory nerves

B. Sensory nerves $\rightarrow$ Bipolar neurons $\rightarrow$ Ganglionic cells $\rightarrow$ Photosensory cells

C. Sensory nerves $\rightarrow$ Ganglionic cells $\rightarrow$ Bipolar neurons $\rightarrow$ Photosensory cells

D. Photosensory cells $\rightarrow$ Ganglionic cells $\rightarrow$ Bipolar neurons $\rightarrow$ Sensory nerves

**Answer: C**

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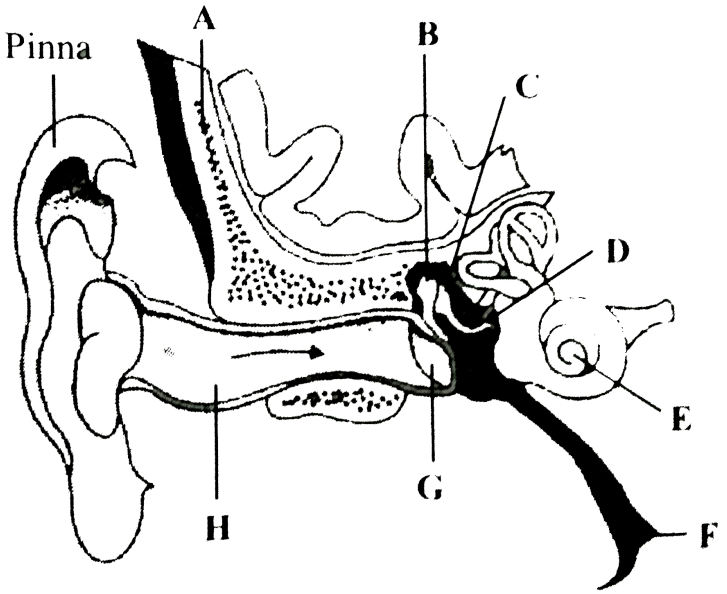
**117.** A diagram of ear is given here.Identify the parts A to H and select the correct option.




A. A-Temporal bone, B-Malleus, C-Incus, D-Stapes, E-Cochlea, F-Eustachian tube, G-Tympanic membrane, H-External auditory canal

B. A-Tympanic membrane, B-Malleus, C-Incus, D-Stapes, E-Cochlea, F-Eustachian tube, G-Temporal bone, H-External auditory canal

C. A-Tympanic membrane, B-Incus, C-Malleus, D-Stapes, E-Cochlea, F-Eustachian tube, G-Temporal bone, H-External auditory canal

D. A-Temporal bone, B-Malleus, C-Incus, D-Cochlea, E-Stapes, F-Eustachian tube, G-Tympanic membrane, H-External auditory canal

**Answer: A**

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**118.** Which of the following statements is incorrect ?

A. Sympathetic neural system controls and coordinates organs which are under voluntary control

B. Deficiency of vitamin A can causes night blindness

C. Malleus is the largest ear ossicle

D. Cranial nerve IX is a mixed nerve

**Answer: A**

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**119.** Eustachian tube is a passage connecting the

A. inner ear with pharynx

B. eye with close

C. middle ear with pharynx

D. middle ear with eye

**Answer: C**

Watch Video Solution

**120.** Select the option that correctly matches the structures with its location and function.

A.

| Structure | Location | Function |
| --- | --- | --- |
| Eustachian tube | Anterior part of internal ear | Equalises air pressu |

B.

| Structure | Location | Function |
| --- | --- | --- |
| Cerebellum | Midbrain | Controls respiration and gastric secretions |

C.

| Structure | Location | Function |
| --- | --- | --- |
| Hypothalamus | Forebrain | Controls body temperature, urge for eat |

D.

| Structure | Location | Functi |
| --- | --- | --- |
| Blind spot | Near the place where optic nerve leaves the eye | Rods a |

**Answer: C**

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**121.** The part of the ear where sound is transduced is

A. tympanic membrane

B. ear ossicles

C. semicircular canals

D. cochlea

**Answer: D**

Watch Video Solution

**122.** Bony labyrinth is filled with a fluid called

A. endolymph

B. perilymph

C. hololymph

D. juxtalymph

**Answer: B**

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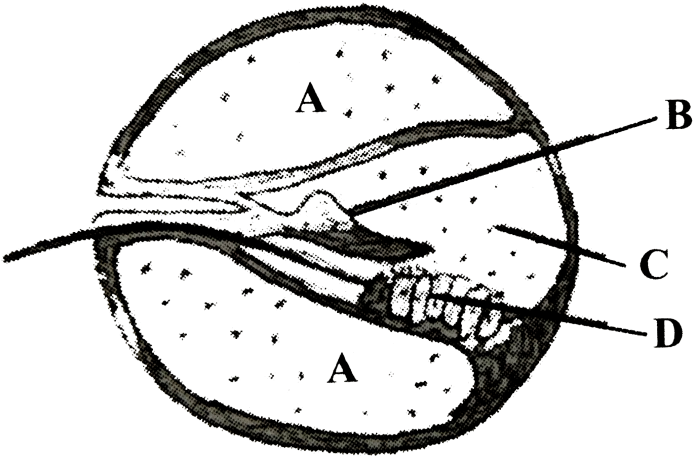
**123.** A diagrammatic cross section of a single loop of human cochlea is shown in the given figure.




Which one of the following options correctly represents the names of any three of the labelled parts ?

A. A-endolymph, B-techorial membrane, D-sensory hair cells

B. A-perilymph, B-techorial membrane, C-endolymph

C. B-tectorial membrane, C-perilymph, D-secretory cells

D. A-serum, C-endolymph, D-sensory hari cells

**Answer: B**

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**124.** A small passage that permits continuity between scala vestibuli and scala tympani is

A. helicotrema

B. Eustachian tube

C. cochlea

D. vestibule

**Answer: A**

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**125.** Internal ear is filled with

A. perilymph

B. endolymph

C. lymph

D. both (a) and (b)

**Answer: D**

Watch Video Solution

**126.** Match column I with column II and select the correct option from the given codes.

A. A-(i), B-(ii), C-(iii), D-(iv), E-(v), F-(vi), G-(vii)

B. A-(vii), B-(vi), C-(v), D-(iv), E-(iii), F-(ii), G-(i)

C. A-(i), B-(ii), C-(iv), D-(iii), E-(v), F-(vi), G-(vii)

D. A-(i), B-(ii), C-(iii), D-(iv), E-(v), F-(vii), G-(vi)

**Answer: A**

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**127.** The thin elastic membrane covering the sensory hair cells of the ear is known as

A. Reissner's membrane

B. techorial membrane

C. basilar membrane

D. neuro-sensory membrane

**Answer: D**

Watch Video Solution

**128.** Which of the following is a correct match of ear part and its functions ?

A. Organ of Corti - Increases the efficiency of sound waves

B. Eustachian tube - Maintains body balance and posture

C. Tectorial membrane - Determines patterns of vibration of sound waves

D. Semicircular canal - Equalises the pressure on either sides of the ear drum

**Answer: C**

Watch Video Solution

**129.** Macula maintains

A. static equilibrium

B. dynamic equilibrium

C. both (a) and (b)

D. None of these

**Answer: A**

Watch Video Solution

**130.** The structures in a human body that assist in body balance are located in the

A. outer ear

B. middle ear

C. inner ear

D. Eustachian tube

**Answer: C**

Watch Video Solution

**131.** The balancing orgain of ear is

A. lagena and sacculus

B. semicircular canal and utriculus

C. semicircular canal and ossicles

D. otolith and lagena

**Answer: B**

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**132.** Following is a list of the events (in a random order) that lead to the formation of an auditory impulse.

(i)Vibration is transferred from the malleus to the incus to the stapes.

(ii)Basilar membrane moves up and down.

(iii)Nerve impulse is transmitted in cochlear nerve to auditory cortex of brain for impulse analysis and recognitions.

(iv)Sound waves pass through ear canal.

(v)Stereocilia of hair cells of organ of Corti rub against tectorical membrane.

(vi)Sound waves cause ear drum to vibrate.

(vii)Nerve impulse is generated

(viii)Vibrations move from fluid of vestibular canal to the fluid of tympanic canal.

(ix)Membrane at oval window vibrates.

Which of the following options represents these events in a correct order ?

A. (iv), (vi), (i), (ix), (viii), (ii), (v), (vii), (iii)

B. (i), (ii), (iii), (iv), (v), (vi), (vii), (viii), (ix)

C. (ix), (viii), (vii), (vi), (v), (iv), (iii), (ii), (i)

D. (iv), (vi), (i), (viii), (ix), (ii), (v), (vii), (iii)

**Answer: A**

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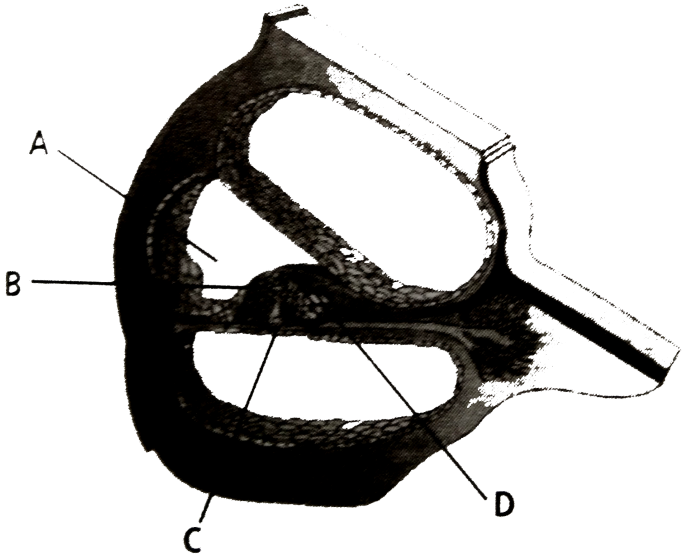
**133.** Identify the parts labelled as A,B,C and D in the given figure and match the correct names from the list (i-viii) given below.




(i)Reissner's membrane , (ii)Basilar membrane

(iii)Tectorial membrane , (iv)Organ of Corti

(v)Hair cellls , (vi)Otolith organ

(vii)Scala media , (viii)Scala vestibuli

A. $\begin{matrix} A & B & C & D \\ (\text{ii}) & (\text{v}) & (\text{iii}) & (\text{i}) \end{matrix}$

B. $\begin{matrix} A & B & C & D \\ (\text{vii}) & (\text{iv}) & (\text{ii}) & (\text{iii}) \end{matrix}$

C. $\begin{matrix} A & B & C & D \\ (\text{vii}) & (\text{iv}) & (\text{i}) & (\text{ii}) \end{matrix}$

D. $\begin{matrix} A & B & C & D \\ (\text{viii}) & (\text{vi}) & (\text{i}) & (\text{iii}) \end{matrix}$

**Answer: D**

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**134.** High frequency sound waves vibrate the basilar membrane

A. near the oval window

B. near the helicotrema

C. in the middle of cochlea

D. from oval window to helicotrema

**Answer: A**

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**135.** The sensory receptors that respond to sound, develop receptor potentials when their

A. hair are bent

B. pigments absorb pressure

C. surface proteins are altered by a change in pH.

D. sodium-potassium pumps become deactivated.

**Answer: A**

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**136.** If a patient suffers a stroke that destroys the optic tract on the right side of the brain, which of the following visual defects will result ?

A. There will be no vision in the left eye, but vision will be normal in the right eye.

B. The patient will not perceive images of objects striking the left half of the retina in the left eye.

C. The patient will not perceive images of objects strinking the right half of the retina in the right eye.

D. Neither eye will perceive objects in the right side of the patient's field of view.

**Answer: C**

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**137.** Which correctly describes a step in auditory signal transduction ?

A. Displacement of the basilar membrane with respect to the tectorial membrane stimulates stereocilia on the hair cells.

B. Pressure waves on the oval window cause vibrations of the melleus, which are transferred via the stapes to the round window.

C. Movement of the stapes causes oscillations in the tympanic membrane, which is in contract with the endolymph

D. Oscillations of the stapes against the oval window set up pressure waves in the semicircular canals.

**Answer: A**

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**138.** An investigator places an isolated neuron in a calcium-free medium, gives the neuron a suprathreshold stimulus and then performs an assay to test whether neurotransmitter is released into the medium.Which of the following outcomes would you predict ?

A. No neurotransmitter is detected since influx of calcium into the synaptic knob is required for neurotransmitter release.

B. No neurotransmitter is detected since influx of calcium is required in order for the neurons to conduct an action potential

C. Neurotransmitters is detected since calcium is not required for action potential coduction and the initial stimulus was suprathreshold

D. We cannot predict the outcome without knowing whether the neuron was myelinated or not

**Answer: A**

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**139.** Following is the figure of a saggital section of a human brain.Match the labelled parts with the respective statements given below and select the correct option.

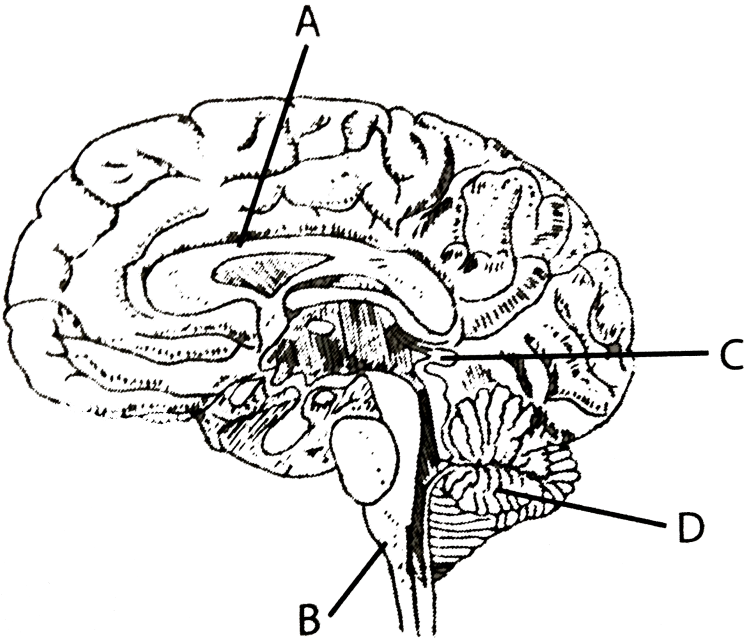
(i)Consists of fibre tracts that interconnect left and right hemispheres

(ii)Secretes a hormone melatonin

(iii)Alcohol interferes with the function of this part

(iv)Contains centres which control respiration , cardiovascular reflexes

and gastric secretions.




A. $(A, B, C, D), ((\text{ii}), (\text{iii}), (\text{i}), (\text{iv}))$

B. $(A, B, C, D), ((\text{iv}), (\text{i}), (\text{iii}), (\text{ii}))$

C. $(A, B, C, D), ((\text{iii}), (\text{ii}), (\text{iv}), (\text{i}))$

D. $(A, B, C, D), ((\text{i}), (\text{iv}), (\text{ii}), (\text{iii}))$

**Answer: D**

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**140.** Two neurons, A and B, synapse onto a third neuron, C.If neurotransmitter from A opens ligand-gated channels permeable to $Na^+$ and $K^+$ and neurotransmitter from B opens ligand-gated $Cl^-$ channels, which of the following statements is true ?

A. An action potential in neuron A causes a depolarisation in neuron B.

B. An action potential in neuron B causes a depolarisation in neuron C.

C. Simultaneous action potentials in A and B will cause hyperpolarisation of neuron C.

D. Simultaneous action potentials in A and B will cause less depolarisation of neuron C than if only neuron A fired an action potential.

**Answer: D**

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**141.** Chemicals which are released at the synaptic junction are called

A. hormones

B. neurotransmitters

C. cerebrospinal fluid

D. lymph

**Answer: B**

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**142.** Potential difference across resting membrane is negatively charged. This is due to differential distribution of the following ions.

A. $Na^+$ and $K^+$ ions

B. $CO^{3++}$ and $Cl^-$ ions

C. $Ca^{++}$ and $Mg^{++}$ ions

D. $Ca^{+4}$ and $Cl^-$ ions

**Answer: A**

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**143.** Resting membrane potential is maintained by

A. hormones

B. neurotransmitters

C. ions pumps

D. none of the above

**Answer: C**

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**144.** The function of our visceral organs is controlled by

A. sympathetic and somatic neural system

B. sympathetic and parasympathetic neural system

C. central and somatic neural system

D. none of the above

**Answer: B**

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**145.** Which of the following is not involved in knee-jerk reflex ?

A. Muscle spindle

B. Motor neuron

C. Brain

D. Interneurons

**Answer: C**

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**146.** An area in the brain which is associated with strong emotion is

A. cerebral cortex

B. cerebellum

C. limbric system

D. medulla

**Answer: C**

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**147.** Mark the vitamin present in rhodopsin

A. Vit. A

B. Vit. B

C. Vit. C

D. Vit. D

**Answer: A**

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**148.** Human eye ball consists of three layers and it encloses

A. lens, iris , optic nerve

B. lens, aqueous humor and vitreous humor

C. cornea, lens, iris

D. cornea, lens, optic nerve.

**Answer: B**

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**149.** Wax gland present in the ear canal is called

A. sweat gland

B. prostate gland

C. cowper's gland

D. sebaceous gland / ceruminous gland

**Answer: D**

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**150.** The part of internal ear responsible for hearing is

A. cochlea

B. semicircular canal

C. utriculus

D. sacculus

**Answer: A**

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**151.** The organ of Corti is a structure present in

A. external ear

B. middle ear

C. semicircular canal

D. cochlea

**Answer: D**

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**152.** While travelling to higher altitudes, people can feel pain in the ear and dizziness.Which part, among the following is involved ?

A. Cochlea, ear ossicles

B. Tympanic membrane

C. Eustachian tube, utricle, saccule and semicircular canals

D. none of the above

**Answer: C**

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**153.** Assertion:This PNS comprises of all the nerves of the body associated with CNS.

Reason:PNS is the site of information processing and control.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: C**

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**154.** Assertion:Multipolar neurons have two or more axons and one dendrite

Reason:Multipolar neurons are found usually in the embryonic stage.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: D**

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**155.** Assertion:Myelinated nerve fibres are present in spinal and cranial nerves.

Reason:Myelinated nerves conduct impulses more radidly than unmyelinated nerves.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: B**

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**156.** Assertion:The resting membrane of the neuron exhibits polarity of charges

Reason:The outer surface of the axonal membrane possesses a negative charge while its inner surface becomes positively charged.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: C**

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**157.** Assertion:Electrical synapses are rare in our system.

Reason:Impulse transmission across an electrical synapse is slower than that across a chemical synapse.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: C**

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**158.** Assertion:Association areas are neither clearly sensory nor motor in function.

Reason:Association areas are responsible for complex functions like intersensory associations, memory and communication.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: D**

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**159.** Assertion:Medulla contains centres which control respiration, cardiovascular reflexes and gastric secretions.

Reason:Medulla contains several neurosecretory cells which secrete hormones.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: C**

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**160.** Assertion:Reflex arc comprises of at least one afferent neuron, one efferent neuron and a part of PNS.

Reason:The efferent neuron receivers signal from a sensory organ and transmits the impulse via a ventral nerve root into the PNS.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: D**

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**161.** Assertion:Choroid layer is thick over the posterior two-third of the eye ball but it becomes thin in the anterior part.

Reason:Choroid layer lacks blood vessels It forms ciliary body in the anterior part of the eye ball.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: D**

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**162.** Assertion:When all the three types of cones are stimulated equally, a mosaic of red, green and blue lights is produced.

Reason:cones are responsible for twilight or scotopic vision.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: D**

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**163.** Assertion:At fovea, the visual acuity is the greatest.

Reason:The fovea is a thick area of the retina where both rods and cones

are present.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: C**

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**164.** Assertion:The space between the cornea and the lens is called the vitreous chamber.

Reason:The space between the lens and retina is called the aqueous chamber.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: D**

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**165.** Assertion:The inner ear contains three ossicles (malleus, incus and stapes) which are attached to one another in a chain-like fashion.

Reason:The stapes is attached to the tympanic membrane and the malleus is attached to the oval window of the cochlea.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: D**

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**166.** Assertion:The Eustachian tube helps in equalising the pressures on either sides of the ear drum.

Reason:The Eustachian tube connects the middle ear cavity with the pharynx.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: B**

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**167.** Assertion:Vestibular apparatus helps us in maintaining balance of body and posture.

Reason:Due to the arrangement of semicircular canals of vestibular apparatus, movement of head in any direction will stimulate sensory cells to maintain dynamic equilibrium.

A. If both assertion and reason are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If assertion is true but reason is false.

D. If both assertion and reason are false.

**Answer: A**

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