BIOLOGY

BOOKS - MODERN PUBLISHERS BIOLOGY (HINGLISH)

NEURAL CONTROL AND COORDINATION

Practice Problems Nerve Impulses

1. List two peculiar properties of nerve fibre.

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2. Give the potential difference in an unexcited and excited nerve fibre.

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3. The movement of which ions causes the depolarisation of nerve fibre?

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4. Define spike potential.

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5. What do you mean by saltatory conduction of nerve impulse?

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6. Give the term for the association of axon of a nerve fibre and dendron of another neuron.

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7. Name the neurotransmitter released at the synapse by the sympathetic nerve fibres.

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8. Acetylcholine is released at the ending of which type of nerve fibres?

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9. Name an animal having giant sized nerve fibres.

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10. Name an inhibitory neurotransmitter.

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Practice Problems Nervous System

1. Name two types of matter of nervous system.

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2. How many meningeal membranes are present over human brain?

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3. State the position of human brain.

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4. Which is the largest lobe of human brain?

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5. Name the cavity of cerebral hemisphere of brain.

Watch Video Solution

6. What is composition of grey matter and white matter?

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

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8. With which function, Broca's area of frontal lobe is associated with?

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9. Name the seat of memory and intelligency in human brain.

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10. Which part of human brain acts as relay centre?

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11. Name the thermoregulatory centre of human body.

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12. Which two cavities of brain are connected by foramen of Monro?

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13. What do you mean by optic quadrigemina?

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14. State the functions of cerebellum.

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15. Which part of human brain controls involuntary functions of body?

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16. What are reflex actions?

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17. Give the significance of reflex actions.

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Practice Problems Receptors

1. Give the location of phonoreceptors.

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2. What is olfactory adaptation?

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3. Name four basic modalities of taste in man.

Watch Video Solution

4. What is binocular vision?

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5. What is nature of lacrymal secretion?

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6. Give the function of Meibomean glands.

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7. Name two parts of fibrous tunica of eye.

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8. What is 'white of eye'?

Watch Video Solution

9. Which pigmented part of eye prevents internal reflection of light?

Watch Video Solution

10. Which structure of human eye helps in accomodation of eye?

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11. Why is iris of eye called diaphragm of eye?

Watch Video Solution

12. Name the photosensitive part of human eye.

Watch Video Solution

13. Name two types of photoreceptors of human eye.

Watch Video Solution

14. Which photoreceptors of eye help in colour vision?

Watch Video Solution

15. Name the photosensitive pigment of rods of eye.

Watch Video Solution

16. What is blind spot ?

Watch Video Solution

17. Which part of human eye is most sensitive to bright light?

Watch Video Solution

18. Give the sequence of three ear ossicles of man.

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19. Which canal connects the pharynx with tympanic cavity?

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20. Name the hearing apparatus of human ear.

Watch Video Solution

21. Give the location of hearing apparatus in human ear.

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22. Human ear is most sensitive to which frequency sound waves?

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23. Which structures of human ear help in maintaining equilibrium?

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Ncert File Solved Ncert Exercise Questions

1. Briefly describe the structure of the following :

(a) Brain

(b) Eye

(c) Ear

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2. Compare the following :

(a) Central nerual system (CNS) and Peripheral neural system (PNS).

(b) Resting potential and actions potential .

(c) Choroid and retina.

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3. Explain the following processes:

(a) Polarisation of the membrane of a nerve fibre.

(b) Depolaristion of the membrance of a nerve fibre.

(c) Conduction of nerver impulse along a nerve fibre.

(d) Transmission of a berve impulse across a chemical synapse.

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4. Draw labelled diagrams of the following :

(a) Neuron

(b) Brain

(c) Eye

(d) Ear

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5. Write short notes on the following : (a) Neural coordination (b) Forebrain (c) Midbrain (d) Retina (e) Ear ossicles (f) Cochlea

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6. Give a brief account of :

(a) Mechanism of synaptic transmission

(b) Mechanism of vision

(c) Mechanism of hearing

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7. Answer briefly :

(a) How do you perceive the colour of an object ?

(b) Which part of our body helps us in maintaining the body balance ?

(c) How does the eye regulate the amount of light that falls on the retina.

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8. Explain the following :

(a) Role of Na^+ in the gneration of action potential.

(b) Mechanism of generation of light- induced inpulse in the retina .

(c) Mechanism through which a sound produces a nerve impulse in the inner ear .

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9. Differentiate between :

(a) Myelinated and non-myelinated axons (b) Dendrites and axons

(c) Rods and cones (d) Thalamus and Hypothalamus

(e) Cerebrum and Cerebellum

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10. Answer the following :

(a) Which part of the ear determines the pitch of a sound ?

(b) Which part of the human brain is the most developed ?

(c) Which part of our central neural system acts as a master clock ?

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11. The region of the vertebrate eye, where the optic nerve passes out of the retina, is called the

(a) fovea

(b) iris

(c) blind spot

(d) optic chaisma

A. Fovea

B. Iris

C. Blind spot

D. Optic chiasma

Answer: c

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12. Distinguish between :

(a) afferent neurons and efferent neurons

(b) impulse conduction in an myelinated nerve fibre and unmyelinated nerve fibre

(c) aqueous humour and vitreous humor

(d) blind spot and yellow spot

(f) cranial nerves and spinal nerves .

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Ncert Exemplar Problems A Multiple Choice Questions

1. 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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2. 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 CI^- ions

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

D. Ca^{++} and CI^- ions

Answer: A

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3. Resting membrane potential is maintained by

A. Hormones

B. Neurotransmitters

C. Ion pumps

D. None of the above

Answer: C

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4. The function of our visceral organs is controlled by

A. Sympathetic and somatic neural system

B. Sympathetic and para - sympathetic neural system

C. Central and somatic nervous system

D. None of the above

Answer: B

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

A. Muscle

B. spindle

C. Motor neuron

D. Brain

Answer: C

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

A. Cerebral cortex

B. Cerebellum

C. Limbic system

D. Medulla

Answer: C

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7. Mark the vitamin present in rhodopsin

A. Vit A

B. Vit B

C. Vit C

D. Vit D

Answer: A

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8. 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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9. 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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10. The part of internal ear responsible for hearing is

A. Cochlea

B. Semicircular canal

C. Utriculus

D. Sacculus

Answer: A

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11. 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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Ncert Exemplar Problems B Very Short Answer Type Questions

1. Rearrange the following in the correct order of involvement in electrical impluse movement :

Synaptic knob, dendrites, cell body, axon terminal, axon.

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2. Comment upon the role of ear in maintaining the balance of the body and posture.

Watch Video Solution

3. Which cell of retina enable us to see coloured objects around us ?

Watch Video Solution

4. Arrange the following in the order of reception and transmission of sound wave from the ear drum.Cochlear nerve, external auditory canal, ear drum, stapes, incus, malleus, cochlea.

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5. When the potential across the axon membrane is more negative than the normal resting potential the neuron is said to be state of

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6. Name the structure involved in the protection of the brain.

Watch Video Solution

7. Our reaction like aggressive behaviour, use of abusive words, restlessness etc. are regulated by brain, name the parts involved.

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8. What do grey and white matter in the brains represent ?

Watch Video Solution

9. Where is the hunger centre located in human brain?

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10. Which sensory organ is involved in vertigo (sensation of oneself or objects spinning around)?

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11. While travelling at a higher altitude, a person complains of dizziness and vomiting sensation. Which part of the inner ear is disturbed during the journey?

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12. Complete the statement by choosing appropriate match among the following :

(a) Resting potential	(i) Chemicals involved in transmission of impulses at synapse
(b) Nerve impulse	(ii) Gap between the pre-synaptic and post-synaptic neurons
(c) Synaptic cleft	(iii) Electric potential difference across the resting neural membrane
(d) Neurotransmitters	(iv) An electric wave like response of a neuron to a stimulation

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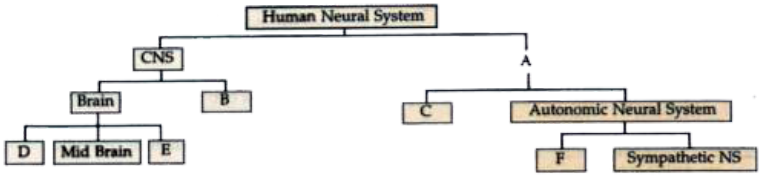
Ncert Exemplar Problems B Short Answer Type Questions

1. The major parts of the human neural system is depicted below. Fill in the empty boxes with appropriate words :



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2. What is the difference between electrical tramission and chemical transmission ?

Watch Video Solution

3. Neuron system and computers shares certain common features. Comment in five lines,.

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4. If someone receives a blow on the back of neck, what would be the effect on the person's CNS?

Watch Video Solution

5. What is the functions described to Eustachian tube ?

Watch Video Solution

6. Label the following parts in the diagram of eye :

(a) Aqueous chamber

(b) Cornea

(c) Lens

(d) Retina

(e) Vitreous chamber

(f) Blind spot

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Ncert Exemplar Problems D Long Answer Type Questions

1. Expalin the process of the transpot and relase of a neurotransmitter with the help of a labelled diagram showing a complete neuron, axon terminal and synapse.

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2. Name the parts of human forebrain indicating their repective functions.

Watch Video Solution

3. Explain the structure of middle ear and internal ear with the helpof diagrams.

Watch Video Solution

Higher Order Thinking Skills Brain Twisting Very Short Answer Questions

1. Enlist two properties of a polarized nerve fibre.

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2. Why is $Na^+ - K^+$ exchange pump called an electrogenic pump?

Watch Video Solution

3. Why the vitamin-A (retinol) is essential for night vision?

Watch Video Solution

4. Give the technical term for the junction of end knob of an axon and dendron of another neuron.

Watch Video Solution

5. Which neurotransmitter is released at the end of sympathetic nerve fibres?

Watch Video Solution

6. Give the location and function of corpus callosum.

Watch Video Solution

7. Which part of brain regulates the emotional behavior of the body?

Watch Video Solution

8. How many cranial and spinal nerves are present in man?

Watch Video Solution

9. What is olfactory adaptation?

Watch Video Solution

10. Which type of photoreceptors are present in blind spot and yellow spot of eye?

Watch Video Solution

11. Give the sequence of ear ossicles in middle ear.

Watch Video Solution

12. Enlist three peculiar features of mammalian ear.

Watch Video Solution

13. Which structures of human ear control dynamic and static equilibrium.

Watch Video Solution

Higher Order Thinking Skills Brain Twisting Short Answer Questions

1. Differentiate between rest potential and action potential.

Watch Video Solution

2. What is significance of saltatory conduction of nerve impulses?

Watch Video Solution

3. Why conduction of nerve impulse across the synapse is always unidirectional from axon to dendron?

Watch Video Solution

4. Give the function of the following parts of CNS:

(i) Meninges

(ii) Thalami

(iii) Brocas' area

(iv) Spinal cord

Watch Video Solution

5. Differentiate between rods and cones of retina.

Watch Video Solution

6. What is Eustachian tube? Give its function.

Watch Video Solution

7. Explain the transmission of nerve impulse along a nerve fibre.

Watch Video Solution

8. Mention where the following are located in the human brain, and give one function of the each :

(a) Temporal lobe, (b) Cerebellum, (c) Corpus callosum.

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9. Write short note on reflex action.

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Higher Order Thinking Skills Brain Twisting Long Answer Questions

1. Draw a labelled diagram of a synapse. Name the two types of synapse. How is nerve impulse transmitted over these synapses?

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Quick Memory Test A Say True Or False

1. Centres for involuntary functions are located in cerebral cortex.

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2. A sensory nerve conducts nerve impulses from brain to muscles of the body.

Watch Video Solution

3. Synaptic transmission takes place from axon to dendron and vice versa.

Watch Video Solution

4. Cerebellum coordinates all the involuntary functions of the body.

Watch Video Solution

5. Sense organs concerned with equilibrium are located in cerebellum.

Watch Video Solution

6. Deficiency of cones causes colour-blindness while deficiency of rods causes night-blindness.

Watch Video Solution

7. The part of an eye which acts like a diaphragm of a photographic camera is

Watch Video Solution

8. Yellow spot is also called macula lutea.

Watch Video Solution

9. Stirrup-shaped ear ossicle is stapes.

Watch Video Solution

10. Organ of Corti is present in cochlea while cristae are present in semicircular canals.

Watch Video Solution

11. CSF is secreted by anterior choroid plexus of roof of medulla oblongata.

Watch Video Solution

Watch Video Solution

12. Arbor vitae are present in the cerebellum.

Watch Video Solution

13. Foramen of Monro connects 3rd and 4th ventricles of brain.

Watch Video Solution

14. Trigeminal is the smallest cranial nerve while Vagus is the longest cranial nerve.

Watch Video Solution

15. Sympathetic nervous system is thoracolumbar in origin.

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Quick Memory Test B Complete The Missing Links

1. Part of brain acting as relay centre is ..... .

Watch Video Solution

2. Iter connects ..... ventricle of diencephalon with ..... ventricle of medulla oblongata.

Watch Video Solution

3. A nerve fibre with electropositive inside and electronegative outside is called ..... .

Watch Video Solution

4. Junction between two neurons is called a ..... while junction between a neuron and a muscle fibre is called a ..... .

Watch Video Solution

5. Neurotransmission through a synapse is always from ..... to ..... .

Watch Video Solution

6. Auditory area is located in..... while olfactory area is located in .....

.

Watch Video Solution

7. Brain is located in ..... while the spinal cord is located in ..... .

Watch Video Solution

8. Peripheral part of cerebral hemisphere is called ..... while inner part of cerebral hemisphere is called ..... .

Watch Video Solution

9. The potential difference developed in a depolarized nerve fibre is called .....

Watch Video Solution

10. Spontaneous, automatic and mechanical responses are called ..... .

Watch Video Solution

11. We see colour with the help of ..... cells while vision in dim light depends on ..... cells of the retina.

Watch Video Solution

12. Area of retina with only cones is called ..... while area of retina with no photoreceptors is called ..... .

Watch Video Solution

13. Hearing apparatus of ear is called ..... .

Watch Video Solution

14. Corpora bigemina is found in brain of ..... while corpora quadrigemina is found in brain of ..... .

Watch Video Solution

15. Hammer-like ear ossicle is ..... while stirrup-shaped ear ossicle is ..... .

Watch Video Solution

16. Iodopsin is visual pigment of..... while rhodopsin is visual pigment of ..... .

Watch Video Solution

17. "White of eye" is the part of ..... of eye.

Watch Video Solution

18. ..... is filled with endolymph while ..... is filled with perilymph.

Watch Video Solution

19. ..... of brain controls the behaviour patterns of man.

Watch Video Solution

20. ..... area of brain converts informations of short-term memory to long-term memory.

Watch Video Solution

21. Permeability of cell membrane to Na^+ ion is called ..... .

Watch Video Solution

22. ..... acts as diaphragm of eye.

Watch Video Solution

23. ..... act as shutters of eye.

Watch Video Solution

24. Pressure inside the tympanic cavity of middle ear is kept equal to that outside the ear drum by ..... .

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25. ..... and ..... of vestibule and semicircular canals are associated with equilibrium.

Watch Video Solution

Quick Memory Test C Choose The Correct Alternative

1. Structural and functional units of nervous system are neurons/nephron.

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2. In excited nerve fibre, neurilemma is more permeable to Na^+ / K^+ ions.

Watch Video Solution

3. In medullated nerve fibre, the nerve impulse is conducted in wave manner/saltatory manner.

Watch Video Solution

4. Neurosecretion of neurotransmitter from the synaptic vesicles is triggered by Ca^{++} / Mg^{++} ions.

Watch Video Solution

5. Visual area is located in frontal/partietal/occipital part of cerebrum.

Watch Video Solution

6. Hypothalamus/Thalamus acts as a link between nervous systems and endocrine system.

Watch Video Solution

7. Cavity of medulla is called 3rd ventricle/4th ventricle.

Watch Video Solution

8. Cranial nerve supplying the visceral organ is vth/xth.

Watch Video Solution

9. Most of acquired habits are unconditioned/conditioned reflexes.

Watch Video Solution

10. Sympathetic/parasympathetic nerve fibres decrease rate of heart beat.

Watch Video Solution

11. Taste papillae of bitter taste are located in anterior/posterior part of tongue.

Watch Video Solution

12. Bowman's glands are located in olfactory epithelium/organ of Corti.

Watch Video Solution

13. Cornea/sclerotic of eye forms "White of eye".

Watch Video Solution

14. Iris/Eye lids of eye acts/ act as diaphragm of eye.

Watch Video Solution

15. Cristae/maculae lie in the ampullae of semicircular canals.

Watch Video Solution

Revision Exercises Very Short Answer Questions

1. Where are lateral ventricles located?

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2. Name the cavity where brain is located.

Watch Video Solution

3. What are three meninges or membranes of brain?

Watch Video Solution

4. What is a synapse?

Watch Video Solution

5. Which part of eye gives colour to eye?

Watch Video Solution

6. Which muscles control the size of pupil ?

Watch Video Solution

7. Where is the organ of Corti located?

Watch Video Solution

8. Name three auditory ossicles.

Watch Video Solution

9. Name the chambers of the cochlea.

Watch Video Solution

10. Name four basic types of tastes.

Watch Video Solution

11. Name the area of retina which contains only cones.

Watch Video Solution

12. What is function of eustachian tube?

Watch Video Solution

13. Why is blind spot devoid of ability of vision?

Watch Video Solution

14. Name band of nerve fibres that joins two cerebral hemispheres in mammals.

Watch Video Solution

15. How do you call the conduction of impulse along a myelinated nerve fibre?

Watch Video Solution

16. Give technical names of auditory ossicles in natural sequence.

Watch Video Solution

17. Name the chemical which helps in transmitting nerve impulse at synapse.

Watch Video Solution

18. Which part of brain controls heart beat?

Watch Video Solution

19. Which chemical is secreted by the axon endings into the synaptic cleft ?

Watch Video Solution

20. What is a synapse ?

Watch Video Solution

21. Which type of cells of eye enable us to see in the dark?

Watch Video Solution

22. What is synaptic fatigue ?

Watch Video Solution

23. Name the sensory cranial nerve that is responsible for sense of equilibrium of the body.

Watch Video Solution

24. What is saltatory conduction of the nerve impulse?

Watch Video Solution

Revision Exercises Short Answer Questions

1. List the functions of cerebrum.

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2. List the unique features of human brain.

Watch Video Solution

3. Why does a person standing for a long time get tired when he does not appear to be doing any work ?

Watch Video Solution

4. Differentiate between polarized membrane and depolarized membrane.

Watch Video Solution

5. What is eustachian tube? Give its function.

Watch Video Solution

6. Differentiate between crista and macula.

Watch Video Solution

7. Blind spot in the eye is devoid of the ability of vision ? Why is it so ?

Watch Video Solution

8. If a strong odour is smelled continuously for some time, the sensation of that weakens. Justify.

Watch Video Solution

9. What is reflex action? What is its significance?

Watch Video Solution

10. Name the ear ossicles in the order of arrangement in humans. What role do they play in hearing ?

Watch Video Solution

11. Explain two functions of cerebrospinal fluid.

Watch Video Solution

12. What are rods and cones cells?

Watch Video Solution

13. Name the location and function of Meibomian glands in the human eye.

Watch Video Solution

14. Where are Bowman's glands located in our nasal chamber? Mention their functions.

Watch Video Solution

15. Describe T.S. of the spinal cord.

Watch Video Solution

16. Write down the general function of the nervous system.

Watch Video Solution

17. What is colour vision? Name the cells responsible for it.

Watch Video Solution

18. Draw a schematic diagram to show reflex arc. Label the components of pathway.

Watch Video Solution

19. How do the following differ?

(i) White matter and Grey matter (ii) Receptor and Effector

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20. Explain any three functions of cerebrospinal fluid.

Watch Video Solution

21. Give the location and function of the following in the human eye :

(i) Cornea (ii) Iris (iii) Vitreous humour

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22. Draw a diagram of V.S. of human eye and label any six parts.

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23. Which bones help in hearing ? Where are they found?

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Revision Exercises Long Answer Questions

1. Enlist the functions of different parts of human ear in hearing.

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2. Describe the functions of various parts of brain.

Watch Video Solution

3. What is a synapse? How is the nerve impulse transmitted across a chemical synapse?

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Competition File Objective Type Questions A Multiple Choice Questions

1. 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 again back to positive

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

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

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

Answer: B

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2. Bowman's glands are located in the

A. Olfactory epithelium of our nose

B. Proximal end of uriniferous tubules

C. Female reproductive system of cockroach

D. Anterior pituitary

Answer: A

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3. An action potential in the nerve fibre is produced when positive and negative charges on the outside and the inside of the axon membrane are reversed, because

A. More potassium ions enter the axon as compared to sodium ions leaving it

B. More sodium ions enter the axon as compared to potassium ions leaving it

C. All potassium ions leave the axon

D. All sodium ions enter the axon

Answer: B

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4. Injury to vagus nerve in humans is not likely to affect

A. Tongue movements

B. Gastrointestinal movements

C. Pancreatic secretion

D. Cardiac movements

Answer: A

Watch Video Solution

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

A. K^+ inside the cell

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

C. Na^+ into the cell

D. Na^+ out of the cell

Answer: C

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6. In which of the following, only cone cells are found?

A. Fovea centralis

B. Retina

C. Fossa ovalis

D. Blind spot

Answer: A

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7. Corpora striata occur in :

A. Cerebellum

B. Cerebrum

C. Medulla

D. Diencephalon

Answer: B

Watch Video Solution

8. The coats of eyeball are :

(1) sclera (2) Retina (3) Conjunctiva (4)Otolith membrane

A. 1, 2 and 3 are correct

B. 1 and 2 are correct

C. 2 and 4 are correct

D. 1 and 3 are correct

Answer: B

Watch Video Solution

9. Which of the following cranial nerves are mixed ?

1. Vagus 2. Trigeminal 3. Glassopharyngeal 4. Auditory

A. 1, 2 and 3 are correct

B. 1 and 2 are correct

C. 2 and 4 are correct

D. 1 and 3 are correct

Answer: A

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10. Which part of brain controls intellectual ability ?

A. Frontal lobe

B. Parietal lobe

C. Temporal lobe

D. Occipital lobe

Answer: A

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11. Which of the following is balancing organ ?

A. Organ of Corti

B. Cochlea

C. Vestibular region

D. All of these

Answer: C

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12. The correct sequence of meninges from outer to the inner side is

A. Duramater $\rightarrow$ arachnoid $\rightarrow$ piamater

B. Arachnoid $\rightarrow$ duramater $\rightarrow$ piamater

C. Piamater $\rightarrow$ duramater $\rightarrow$ arachnoid

D. Duramater $\rightarrow$ piamater $\rightarrow$ arachnoid

Answer: A

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13. The sequence of ear ossicles from outside to inside is :

A. Malleus $\rightarrow$ incus $\rightarrow$ stapes

B. Incus $\rightarrow$ stapes $\rightarrow$ malleus

C. Stapes $\rightarrow$ incus $\rightarrow$ malleus

D. Malleus $\rightarrow$ stapes $\rightarrow$ incus

Answer: A

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14. Synaptic vesicle is found in

A. Pre-synaptic neuron

B. Post-synaptic neuron

C. Synaptic cleft

D. None of these

Answer: A

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15. During repolarization of nerve

A. K^+-gates closed and Na^+-gates opened

B. Na^+-channels closed and K^+-channels opened

C. Both Na^+ and K^+-gates opened

D. Both Na^+ and K^+-gates closed

Answer: B

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16. Protein found in eye lens is

A. Crystalline

B. Collagen

C. Opsin

D. Rhodopsin

Answer: A

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

A. Movement of eye ball

B. Swallowing

C. Movement of tongue

D. Movement of neck

Answer: A

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18. One of the example of the action of the autonomous nervous system is

A. Knee-jerk response

B. Pupillary response

C. Swallowing of food

D. Peristalsis of the intestine

Answer: D

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19. Parkinson's disease (Characterized by tremors and progressive rigidity of limbs) is cause by degeneration of brain neurons that are involved in movement control and make use of neurotransmitter

A. Acetylcholine

B. Norepinephrine

C. Dopamine

D. GABA

Answer: C

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

A. Vagus

B. Facial

C. Abducens

D. Trigeminal

Answer: C

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21. Node of ranvier is found in____

A. Muscle bundles

B. Dendrites

C. Right auricle

D. Axon

Answer: D

Watch Video Solution

22. Which of the following cranial nerves is present in rabbit but absent in frog?

A. Glossopharyngeal

B. Hypoglossal

C. Olfactory

D. Optic

Answer: B

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23. Pecten a comb-like structure is found in the eye of

A. Fish

B. Frog

C. Birds

D. Mammals

Answer: C

Watch Video Solution

24. Static equilibrium is maintianed by

A. Utriculus

B. Sacculus

C. Both (a) and (b)

D. Semicircular canals

Answer: C

Watch Video Solution

25. Columella auris occurs in

A. Rabbit

B. Frog

C. Man

D. All of these

Answer: B

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26. Bony labyrinth of ear contians a fluid known as

A. Perilymph

B. Endolymph

C. Haemolymph

D. Lymph

Answer: A

Watch Video Solution

27. Which of the following prevents internal reflection of light within the eye

or

Coloured (Pigmented) layer of eye is

A. Cornea

B. Choroid

C. Sclera

D. Conjunctiva

Answer: B

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28. Identify the correct sequence of organs/ regions in the organization of human ear as an auditory mechanoreceptor organ

A. Pinna- Cochlea-Tympanic membrane-Auditory canal-Malleus – Stapes-Incus-Auditory nerve

B. Pinna- Tympanic membrane -Auditory canal-Incus-Malleus - Stapes-Cochlea -Auditory canal

C. Pinna- Malleus-Incus-Stapes- Auditory canal- Tympanic membrane - Cochlea -Auditory canal

D. Pinna - Auditory canal - Tympanic membrane - Malleus - Incus - Stapes - Cochlea - Auditory nerve

Answer: D

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29. Myelin sheath is derived from

A. Neuroglial cells

B. Schwann cells

C. Nerve cells

D. All of these

Answer: B

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30. A 22 years student goes to his opthalamologist.He has prooblem in reading books because he is not able to contract his

A. Suspensory ligament

B. Pupil

C. Iris

D. Ciliary muscles

Answer: D

Watch Video Solution

31. Action potential is generated by

A. Na^+

B. K^+

C. Ca^{++}

D. Cl^-

Answer: A

Watch Video Solution

32. Aqueous humour and viterous humour are divided by :

A. Lens

B. Iris

C. Retina

D. Optic nerve

Answer: A

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33. Connection between axon and dendrite is called :

A. Synapsis

B. Synapse

C. Desmosome

D. Tight junction

Answer: B

Watch Video Solution

34. Autonomic nervous system affects

A. Reflex actions

B. Sensory organs

C. Internal organs

D. None of these

Answer: C

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35. A cell (or group of cells) in a sense organ which is sensitive to a particular type of stimulus is called:

A. Heat

B. Cold

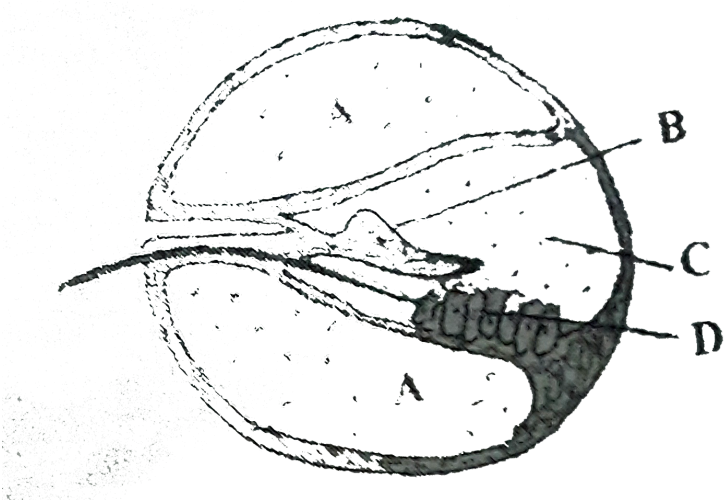
C. Pressure

D. Touch

Answer: A

Watch Video Solution

36. Given below is a diagrammatic cross section of a single loop of human cochlea



Which one of the following options correctly represents the names of three different parts

A. D: sensory hair cells, A : endolymph, B: tectorial membrane

B. A: perilymph, B : tectorial membrane, C: endolymph

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

D. C: endolymph, D: sensory hair cells, A:serum

Answer: B

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37. Which one of the following is the correct difference between rod cells and cone cells of human retina?

	Rod cells	Cone cells
(a) Overall function	Vision in poor light	Colour vision and detailed vision in bright light.
(b) Distribution	More concentrated in centre of retina	Evenly distributed all over retina
(c) Visual activity	High	Low
(d) Visual pigment	Iodopsin	Rhodopsin

Watch Video Solution

38. 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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39. Which one of the following statements is correct?

A. Neurons regulate endocrine activity but not vice versa

B. Endocrine glands regulate neural activity, and nervous system regulates endocrine glands

C. Neither hormones control neural activity nor the neurons control endocrine activity

D. Endocrine glands regulate neural activity but not vice versa

Answer: B

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40. Injury to vagus nerve in humans is not likely to affect

A. Tongue movements

B. Gastrointestinal movements

C. Pancreatic secretion

D. Cardiac movements

Answer: A

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41. Adaptation' of eyes in dark is due to

A. Depletion of vision pigment in rods

B. Depletion of vision pigment in cones

C. Repletion of vision pigment in rods

D. Repletion of vision pigment in cones

Answer: C

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42. Broca's area controls :

(1) Breathing (2) Movement of vocal cords (3) Movement of teeth (4) Movement of tongue

A. 1, 2 and 3 are correct

B. 1 and 2 are correct

C. 2 and 4 are correct

D. 1 and 3 are correct

Answer: C

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43. Which one feature is common to leech, cockroach and scorpion?

A. Nephridia

B. Ventral nerve cord

C. Cephalization

D. Antennae

Answer: B

Watch Video Solution

44. Aqueous and vitreous humor are divided by

A. Lens

B. Iris

C. Retina

D. Optic nerve

Answer: A

Watch Video Solution

45. Autonomic nervous system affects

A. Reflex actions

B. Sensory organs

C. Visceral organs

D. None of these

Answer: C

Watch Video Solution

46. How many pairs of cranial nerves originate from the brain of rat

A. 12

B. 8

C. 9

D. 11

Answer: A

Watch Video Solution

47. Fovea in the eye is a central pit in the yellowish pigmented spot called

A. Blind spot

B. Retina

C. Cornea

D. Macula lutea

Answer: D

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48. The potential maintained across the neuron membrane during the resting state is

A. +70 mv

B. -70 mv

C. -50 mv

D. -30mv

Answer: B

Watch Video Solution

49. Reflex arc consists of

A. Motor nerve

B. Sensory nerve

C. Both of these

D. None of these

Answer: C

Watch Video Solution

50. Echolocation through high frequency sound is trait of

A. Monkey

B. Butterfly

C. Squirrel

D. Bat

Answer: D

Watch Video Solution

51. Part of the brain concerned with the muscular movement is

A. Cerebellum

B. Thalamus

C. Hippocampus

D. Temporal lobe of cerebrum

Answer: A

Watch Video Solution

52. Corpus callosum connects :

A. Two optic lobes

B. Bone and muscle

C. Two cerebral hemispheres

D. Two lobes of pituitary gland

Answer: C

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53. Broca's area of speech is present in :

A. Parietal lobe

B. Frontal lobe

C. Parietal lobe and partially in temporal lobe

D. Temporal and occipital lobes

Answer: B

Watch Video Solution

54. Which part of human brain is concerned with the regulation of body temperature?

A. Medulla oblongata

B. Cerebellum

C. Cerebrum

D. Hypothalamus

Answer: D

Watch Video Solution

55. The posterior part of the retina, which is just opposite to the lens is

A. Cornea

B. Yellow spot

C. Area centralis

D. Both (b) & (c)

Answer: D

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56. In the central nervous system myelinated fibres form the .... While the non-myelinated fibre cells form the .....

A. Grey matter, white matter

B. White matter, grey matter

C. Ependymal cells, neurosecretory cells

D. Neurosecretory cells, ependymal cells

Answer: B

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57. The potential difference across the membrane of nerve fibre when it does not show any physiological activity is called resting potential. It is about

A. $-60mv$

B. $-80mv$

C. $+60mv$

D. $+90mv$

Answer: A

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58. The neurotransmitter product at the synapse and neuromuscular junction is

A. GTP

B. ATP

C. Acetylcholine

D. Phosphokinase

Answer: C

Watch Video Solution

59. The chemical causing the transmission of nerve impulse across synapses is

or

The neurotranmitter which communicates between two neurons or between a neuron and a muscle a

A. Cholinesterase

B. Adrenaline

C. Choline

D. Acetylcholine

Answer: D

Watch Video Solution

60. Satiety centres of brain are present in

A. Cerebral hemisphere

B. Hypothalamus

C. Cerebellum

D. Medulla

Answer: B

Watch Video Solution

61. Themoregulatory centre in the body of bomeothermal animal and man is found in

A. Hypothalamus

B. Cerebellum

C. Cerebrum

D. Medulla oblongata

Answer: A

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62. Eustachian tube connects

A. Pharynx with middle ear

B. Middle ear with internal ear

C. Middle ear with external ear

D. External ear with internal ear

Answer: A

Watch Video Solution

63. A 22 years student goes to his opthalamologist.He has prooblem in reading books because he is not able to contract his

A. Suspensory ligament

B. Pupil

C. Iris

D. Ciliary muscles

Answer: D

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64. Vomiting centre is located in the

A. Stomach and sometimes in duodenum

B. Gastro-intestinal tract

C. Medulla oblongata

D. Pons Varolii

Answer: C

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65. Which foramen is paired in mammalian brain

A. Foramen of Luschka

B. Foramen of Magendie

C. Foramen of Monro

D. Inter-ventricular foramen

Answer: A

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66. Which is thickened to form organ of corti

A. Reissner's membrane

B. Tectorial membrane

C. Bassilar membrane

D. All the above

Answer: C

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67. Select the answer with correct matching of the structure, its location and function:

Structure	Location	Function
(a) Eustachian tube	Anterior part of internal ear	Equalizes air pressure on either sides of tympanic membrane
(b) Cerebellum	Mid brain	Controls respiration and gastric secretions
(c) Hypothalamus	Fore brain	Controls body temperature, urge for eating and drinking
(d) Blind spot	Near the place where optic nerve leaves the eye	Rods and cones are present but inactive here

View Text Solution

68. V cranial nerve of frog is

A. Facial

B. Olfactory

C. Trigeminal

D. Vagus

Answer: C

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69. Pigment lodopsin in contained in

A. Rod cells

B. Cone cells

C. Amacrine cells

D. Horizontal cells

Answer: B

Watch Video Solution

70. Organ of Corti helps in

A. Maintaining equilibrium

B. Hearing

C. Formation of wax

D. All of these

Answer: B

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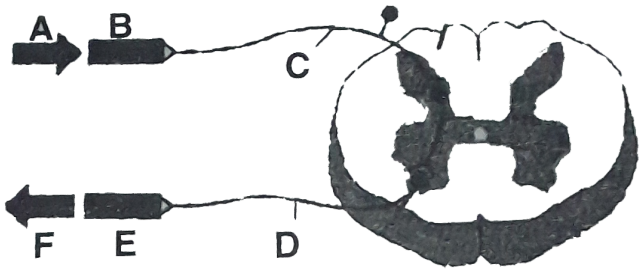
71. The following is the scheme showing the path of reflex arc. Identify the different labellinga A, B, C, D, E, F, in the reflex arc



A.

A	B	C	D	E	F
Stimulus	Effector	Sensory nerve	Motor nerve	Receptor	Respor

B.

A	B	C	D	E	F
Stimulus	Receptor	Sensory nerve	Motor nerve	Effector	Respor

C.

A	B	C	D	E	F
Stimulus	Effector	Motor nerve	Sensory nerve	Receptor	Respor

D.

A	B	C	D	E	F
Stimulus	Receptor	Motor nerve	Sensory nerve	Effector	Respor

Answer: B

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72. Parasympathetic nerves arise from which region of the nervous system

A. Thoracolumbar

B. Cervical

C. Cranio-sacral

D. Lumbar

Answer: C

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73. Colour perception in man is due to

A. Rhodopsin present in rod cells

B. Iodopsin present in cone cells

C. Iodopsin present in rod cells

D. Rhodopsin present in cone cells

Answer: B

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74. The innermost layer of the human eye is

A. Choroid

B. Cornea

C. Sclera

D. Retina

Answer: D

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75. 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

76. Which one of the follwing cranial nerves is carrying the nerve fibres originating from the Edinger-Westphal nucleus

A. Occulomotor

B. Trochlear

C. Abducens

D. Vagus

Answer: A

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77. How many laminae are present in the grey matter of spinal cord.

A. Four

B. Six

C. Eight

D. Ten

Answer: D

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78. Colour blindness is due to defect in

A. Cones

B. Rods

C. Rods and cones

D. Rhodopsin

Answer: A

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79. The third ventricle of the brain is situated in the

A. Base of telencephalon

B. Roof of metencephalon

C. Roof of diencephalon

D. Base of myelencephalon

Answer: C

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80. The optic lobes in humans are represented by the corpora

A. Bigemina

B. Arenacea

C. Striata

D. Quadrigemina

Answer: D

Watch Video Solution

81. The vibrations of the tympanic membrane are amplified about ..... times in oval window :

A. 5

B. 20

C. 40

D. 55

Answer: B

Watch Video Solution

82. The forward stereoscopic visual field will be the greatest in

A. Cat

B. Deer

C. Rabbit

D. Horse

Answer: A

Watch Video Solution

83. Sensory structure that responds to pressure change is

A. Meissner's corpuscles

B. Pacinian corpuscles

C. Endbulb of Krause

D. Organ of Ruffini

Answer: B

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84. When a neuron is in resting state i.e. not conducting any impulse, the axonal membrane is

A. Comparatively more permeable to Na^+ ions and nearly impermeable to K^+ ions

B. Equally permeable to both Na^+ and K^+ ions

C. Impermeable to both Na^+ and K^+ ions

D. Comparatively more permeable to K^+ ions and nearly impermeable to Na^+ ions

Answer: D

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85. The purplish red pigment rhodopsin contained in the rods type of photoreceptor cells of the human eye, is a derivative of

A. Vitamin B_1

B. Vitamin C

C. Vitamin D

D. Vitamin A

Answer: D

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86. The tympanic cavity in frog communicates with pharynx through:

A. Bidder's canal

B. Horizontal canal

C. Semicircular canal

D. Eustachian tube

Answer: D

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87. 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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88. 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. 1 and 2 are correct but 3 and 4 are incorrect

B. 1, 2 and 3 are correct but 4 is incorrect

C. 3 and 4 are correct but 2 and 1 are incorrect

D. 2 and 3 are correct but 1 and 4 are incorrect

Answer: D

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89. The order of the three layers of cells in the retina of human eye from inside to outside is

A. Bipolar cells, photoreceptor cells, ganglion cells

B. Ganglion cells, rods, cones

C. Ganglion cells, bipolar cells, photoreceptor cells

D. Photoreceptor cells, ganglion cells, bipolar cells

Answer: C

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90. The tract of nerve fibres which connects the cerebral hemisphere is

A. Corpus luteum

B. Corpus callosum

C. Corpora quadrigemina

D. Cerebral aqueduct

Answer: B

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91. The human hind brain comparises three parts, one of which is

A. Spinal cord

B. Corpus callosum

C. Cerebellum

D. Hypothalamus

Answer: C

Watch Video Solution

92. Which part of the human ear plays no role in hearing as such but is otherwise very much required

or

Which of the following is balancing organ

A. Eustachian tube

B. Organ of Corti

C. Vestibular apparatus

D. Ear ossicles

Answer: C

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93. A person entering an empty room suddenly fins a snake right in front on opening the door. Which one of the following is likely to happen in his neuro-hormonal control system

A. Sympathetic nervous system is activated releasing epinephrine and nor-epinephrine from adrenal medulla

B. Neurotransmitters diffuse rapidly across the cleft and transmit a nerve impulse

C. Hypothalamus activates the para-sympathetic division of brain

D. Sympathetic nervous system is activated releasing epinephrine and epinephrine from adrenal cortex

Answer: A

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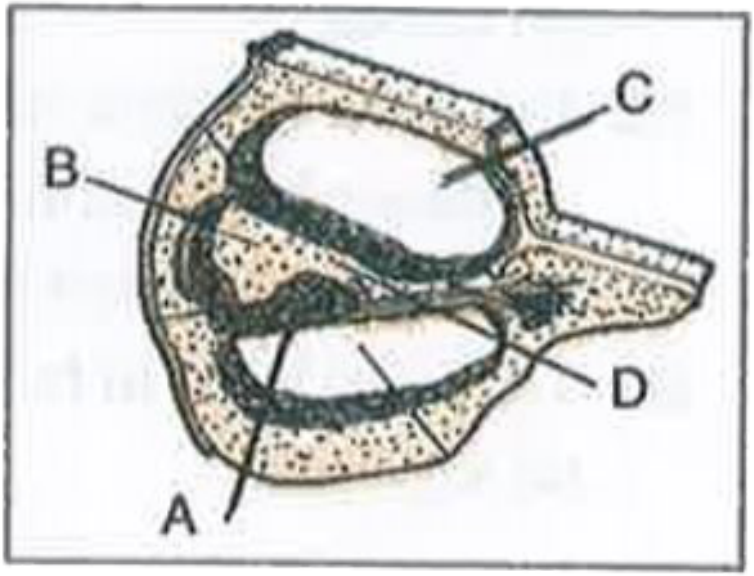
94. Which of the following is correctly matched for the given figure?



A. A = Reissner's membrane

B. B = Scala vestibuli

C. C = Basilar membrane

D. D = Tectorial membrane

Answer: D

Watch Video Solution

95. The release of chemical messenger from synaptic vesucles is under the influence of which of these ion (s) ?

A. Cl^-

B. Fe^+ and S^{++}

C. Ca^{++}

D. Mg^{++} and Si^{++}

Answer: C

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96. Parasympathetic ganglia are present in

A. Head and neck

B. Chains of lateral ganglia

C. Grey matter of thoracic and lumbar regions of spinal cord

D. All of these

Answer: A

Watch Video Solution

97. Which of the following is not a reflex action

A. Blinking of eyes

B. Salivation

C. Sweating

D. Withdrawl of hand on touching some hot object

Answer: C

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98. Nerve gas affects neuromuscular activity by

A. Blocking the acetylcholine receptor sites

B. Inhibiting release of acetylcholine

C. Inhibiting acetylcholinesterase

D. Enhancing release of acetylcholine

Answer: C

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99. 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 neuron to conduct an action potential

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

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

Answer: A

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100. Dark adaptation in human eye includes :

A. Conversion of 11-cis retinene to trans-retinene

B. Conversion of trans-retinene to 11-cis-retinene

C. Decomposition of rhodopsin to retinene

D. Decomposition of rhodopsin to scotopsin

Answer: B

Watch Video Solution

101. The optic lobes in humans are represented by the corpora

A. Bigemina

B. Arenacea

C. Allata

D. Quadrigemina

Answer: D

Watch Video Solution

102. Integration of the visual, tactile and auditory inputs occurs in the

or

Crure cerebrae is found in

A. Peripheral nervous system

B. Corpus callosum

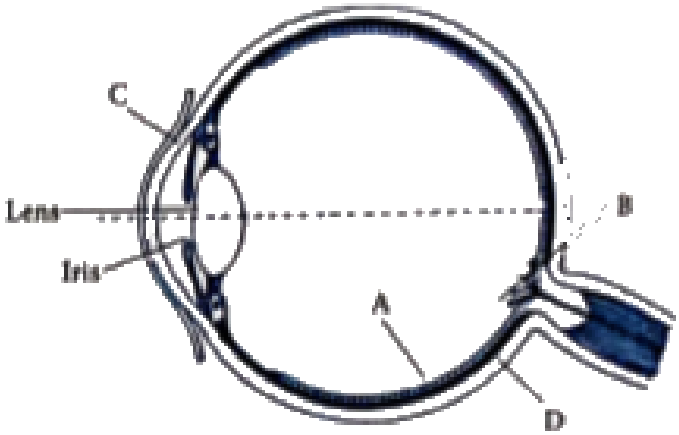
C. Limbic system

D. Midbrain

Answer: D

Watch Video Solution

103. Parts A,B,C and D of the human eys are shown in the diagram. Select the option which gives correct identification along with its functions/characterstisc



A. A - Retina - photoreceptors - rods and cones.

B. B - Blind spot - has only a few rods and cones.

C. C- Aqueous chamber - reflects the light which does not pass through the lens.

D. D- Choroid - its anterior part forms ciliary body.

Answer: A

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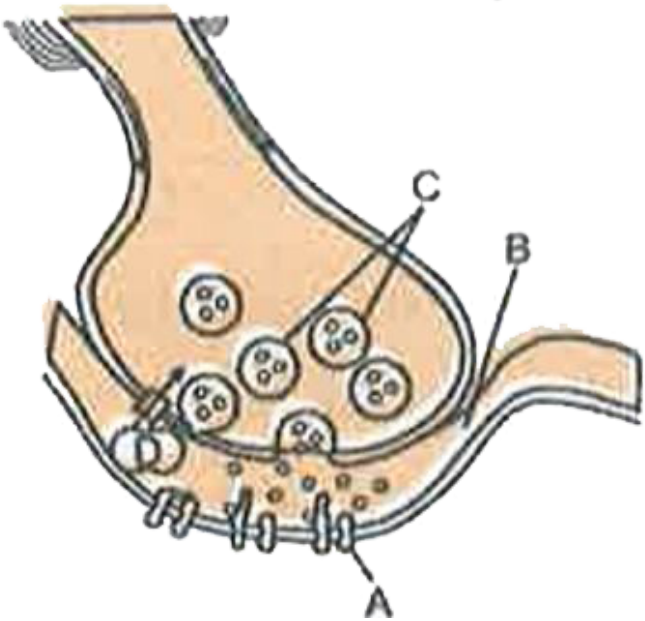
104. A diagram showing axon terminal and synpase is given. Identify correctly at least two of A to D:



A. A- Receptor, C- Synaptic vesicles

B. B - Synptic connection, D- K^+

C. A- Neurotransmitter, B-synaptic cleft

D. A - Neurotransmitter, D- Ca^{++}

Answer: A

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105. One of the following ions are required for nerve impulse transmission at the neuro-muscular junction :

A. Magnesium

B. Chloride

C. Calcium

D. Iron

Answer: C

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106. The Organ of Corti is situated on the :

A. Basilar membrane in tympanic canal

B. Reissner's membrane in vestibular canal

C. Besilar membrane in the median canal

D. Reissner's membrane in tympanic canal

Answer: C

Watch Video Solution

107. The following respond to pressure :

A. Meissner's corpusles

B. Pacinian corpuscles

C. Bulbs of Krause

D. Organ of Ruffini

Answer: B

Watch Video Solution

108. Which one of the following statements is not correct ?

A. Retinal is a derivative of vitamin-C

B. Rhodopsin is the purplish red protein present in rods only

C. Retinal is the light absorbing portion of visual photopigment

D. In retina, the rods have the photopigment rhodopsin, while cones have three different pbotopigments.

Answer: A

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109. Injury localized to the hypothalamus would most likely disrupt

A. Executive functions, such as decision making

B. Regulation of body temperature

C. Short-term memory

D. Coordination during locomotion

Answer: B

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110. How do parasympathertic neural signals affect the working the heart

A. Both heart rate and cardiac output increase

B. Heart rate decreases but cardiac output increases

C. Reduce both heart rate and cardiac output

D. Heart rate is increased without affecting cardiac output

Answer: C

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111. Which of the following regions of the brain is incorrectly paired with its function ?

A. Medulla oblongata-homeostatic control

B. Cerebellum-language comprehension

C. Corpus callosum-communication between cerebral cortices

D. Cerebrum- calculation and contemplation

Answer: B

Watch Video Solution

112. A gymnast is able to balance his body upside down even in the total darkness because of

A. Cochlea

B. Vestibular apparatus

C. Tectorial membrane

D. Organ of Corti

Answer: B

Watch Video Solution

113. Destruction of the anterior horn cell of the spinal cord would result in loss of

A. Sensory impulses

B. Voluntary motor impulses

C. Commissural impulses

D. Integrating impulses

Answer: B

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114. In mammalian eye, the 'fovea' is the centre of the visual field, where

A. High density of cones occurs but has no rods

B. Optic nerve leaves the eye

C. Only rods are present

D. More rods than cones are found

Answer: A

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115. The correct path followed by sound waves from external ear to inner ear is

A. East drum-Basilar membrane-auditory ossicles-Fluid of cochlea-hair cells

B. East drum- auditory ossicles-Fluid of cochlea- Basilar membrane - hair cells

C. East drum- Fluid of cochlea- auditory ossicles- Basilar membrane- heir cells

D. East drum- hair cells- auditory ossicles- Basilar membrane- Fluid of cochlea

Answer: B

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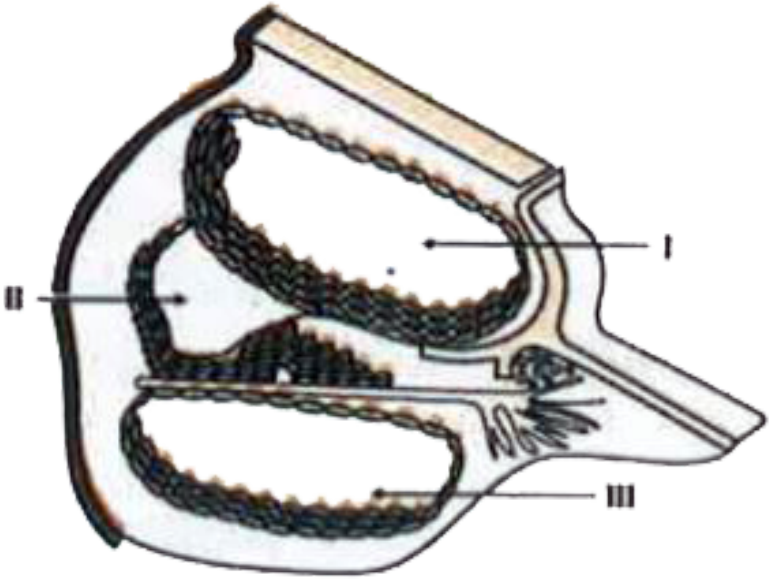
116. Select the correct identification group of labelled part I, II, III



A. I-Scala vestibuli, II-Scala media, III-Scala tympani

B. I- Scala vestibuli, II- Scala typmpani, III - Scala media

C. I- Scala tympani, II- Scala media, III - Scala vestibule

D. I- Scala media, II- Scala tympani, III - Scala vestibuli

Answer: A

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Watch Video Solution

117. The co-ordinator between Nervous and endocrine system is

A. Thalamus

B. Hypothalamus

C. Epithalamus

D. Colliculus

Answer: B

Watch Video Solution

118. How many pairs of sympathetic ganglia are presence in ANS

A. 10

B. 12

C. 22

D. 31

Answer: C

Watch Video Solution

119. Which group of cranial nerves control eyeball movements?

A. Optic, Abducens, Pathetic

B. Optic, Oculomotor, Trochlear

C. Oculomotor, Abducens, Auditory

D. Oculomotor, Abducens, Pathetic

Answer: D

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120. The body temperature regulatory centre in the brain is :

A. Cerebellum

B. Corpus callosum

C. Hypothalamus

D. Hippocampus

Answer: C

Watch Video Solution

121. the anterior portion of sclera is called

A. Lens

B. Iris

C. Pupil

D. Cornea

Answer: D

Watch Video Solution

122. The projecting ridge in am pulla of semicircular canals in ear is called

A. Succus entericus

B. Macula

C. Otolith

D. Crista ampullaris

Answer: D

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123. The pneumotaxic and repiratory rhythm centres respectively present in

A. Pons and medulla oblongata

B. Corpus callosum and pons

C. Medulla oblongata and hypothalamus

D. Diencephalon and pons

Answer: A

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124. Which one of the following acts solely as an inhibitory neurotransmitter?

A. Nor-epinephrine

B. Gamma(λ) amino butyric acid

C. Acetylcholine

D. Dopamine

Answer: B

Watch Video Solution

125. Choose the correct statement:

A. Receptors do not produce graded potential

B. Nociceptors respond to changes in pressure

C. Meissner's corpuscles are thermoreceptors

D. Photoreceptors of human eye are depolarized during darkness and become hyperpolarized in response to the light stimulus

Answer: D

Watch Video Solution

126. Photosensitive compound in human eye is made up of:

A. Transducin and Retinene

B. Guanosin and Retinol

C. Opsin and Retinal

D. Opsin and Retinol

Answer: C

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127. Good vision depends on adequate intake of cacotene rich food

Select the best option from the following statements

(A) Vitamin A derivatives are formed from carotene

(B) The photopigments are embedded in the membrane discs of the ineer segment

(C) Retinal is a derivative of Vitamin A

(D) Retinal is a light absorbing part of all the visual photopigments

A. (1) and (2)

B. (1), (3) and (4)

C. (1) and (3)

D. (2), (3) and (4)

Answer: B

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128. Receptor sites for neurotransmitters are present on

A. Membranes of synaptic vesicles

B. Pre-synaptic membrane

C. Tips of axons

D. Post-synaptic membrane

Answer: D

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129. Myelin sheath is produced by:

A. Schwann cells and oligo dendrocytes

B. Astrocytes and schwann cells

C. Oligodendrocytes and osteoclasts

D. Osteoclasts and Astrocytes

Answer: A

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130. The transparent lens in the human eye is held in its place by

A. Smooth muscles attached to iris

B. Ligaments attached to the iris

C. Ligaments attached to ciliary body

D. Smooth muscles attached to ciliary body

Answer: C

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131. Which of the following structures or region is incorrectly paired with its function ?

A. Hypothalamus- Production of releasing hormones and regulation of temperature, hunger and thirst

B. Limbic system - Consists of fibre tracts that interconnect different regions of brain, controls movement.

C. Medulla oblongata -Controls respiration and cardiovascular reflexes

D. Corpus callosum - Band of fibres connect left and right cerebral hemispheres

Answer: B

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Competition File Objective Type Questions B Cbse Pmt Main Examination Questions

1. Give reason :

(a) If neural connection of heart is severed then the mammalian heart will continue beating or not?

(b) If symathetic control to the heart is re - established in such case what will happen?

(c) If parasympathetic control to the heart is re - established then what will happen?

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2. Answer the question according to instruction :

Tectorial membrane : Location and function.

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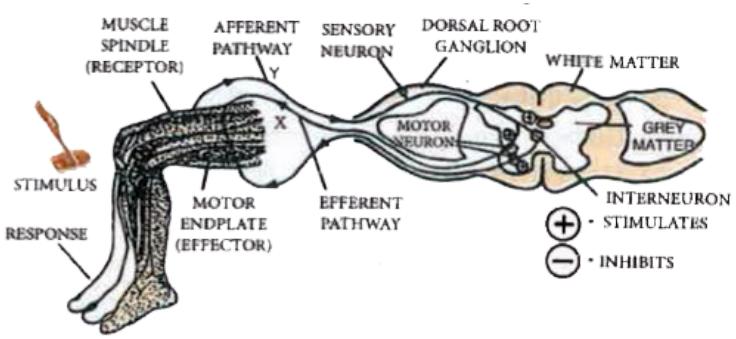
3. (i) What the the type of reflax action?

(ii) Give role of X and Y.

(iii) Identify wrong names and correct them.

(iv) In which part of body stimulus is given ?



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4. Write the incus, malleus and stapes ear ossicles is correct sequence and give their overall function.

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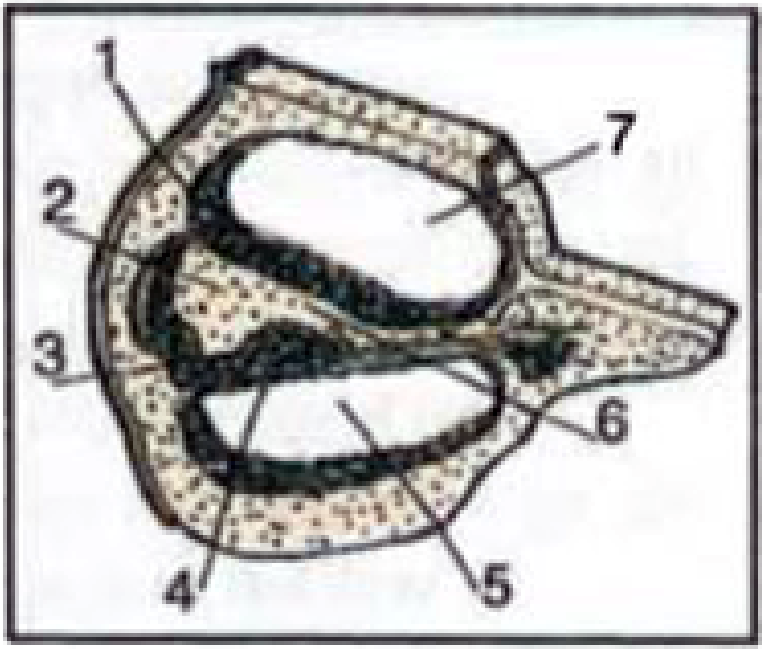
5. Identify the given diagram with its location in human body.

(b) Label no. (2). Name the fluid present in it.

(c) Label nos. (3), (4) and (6). How they help in the functioning of the

above diagram?



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6. Observe the following statement and correct it, if wrong, by changing the underlined words:

Conduction of impulses also axon membrane takes place due to repolarization and depolarization waves.

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Competition File Objective Type Questions C Matching Type Questions

1. Match the terms in column A with suitable terms in column B :

Column A	Column B
(i) Colour vision	(a) Sclerotic
(ii) Hypothalamus	(b) Yellow spot
(iii) White of eye	(c) Internal ear
(iv) Iris	(d) Cones
(v) Fovea centralis	(e) Iodopsin
(vi) Cones	(f) Pituitary
(vii) Endolymph	(g) Colour to eye

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2. Match the entries in column I with those in column II and choose the correct combination from the options given :

Column I	Column II
(a) Diencephalon	1. Cerebellum
(b) Telencephalon	2. Medulla
(c) Myelencephalon	3. Amygdala
(d) Metencephalon	4. Thalamus

A. $a-4, b-3, c-1, d-2$

B. $a-3, b-4, c-1, d-2$

C. $a-4, b-3, c-2, d-1$

D. $a-1, b-2, c-3, d-4$

Answer: C

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3. Given below is a table camparing the effect of sympathetic and parasympathetic nervous system for four features (a-d). Which one feature is correctly described

	Feature	Sympathetic Nervous system	Parasympathetic Nervous System
(a)	Salivary gland	Stimulates secretion	Inhibits secretion
(b)	Pupil of the eye	Dilate	Constricts
(c)	Heart rate	Decreases	Increases
(d)	Intestinal peristalsis	Stimulates	Inhibits

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4. Match the terms in column I with suitable terms in column II :

Column I	Column II
A. Sacral nerves	1. 1 pair
B. Thoracic nerves	2. 8 pairs
C. Coccygeal nerves	3. 7 pairs
D. Cervical nerves	4. 12 pairs
	5. 5 pairs

A. $A-4, B-1, C-3, D-2$

B. $A-5, B-3, C-1, D-2$

C. $A-3, B-4, C-2, D-1$

D. $A-5, B-4, C-1, D-2$

Answer: D

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Competition File Objective Type Questions D Assertion Type Questions

1. Assertion : Accommodation power is present in human eye but absent in frog eye.

Reason : Iridial muscles are present in human eye but are absent in frog eye.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: C

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2. Assertion : Iris of eye is called diaphragm of the eye.

Reason : Iris closes the eye to protect from injury, entry of insects, etc.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: C

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3. Assertion : A man is blind for some time when he comes out of a well lighted room to a dark place.

Reason : Iodopsin of cone cells is bleached in the presence of strong light.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: C

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4. Assertion : Owls have more rods while man has more cones in their retinae.

Reason : Owls are nocturnal while man is diurnal in their activity.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: A

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5. Assertion : Yellow spot is the area of most distinct day vision.

Reason : Yellow spot is with only cone cells.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: A

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6. Assertion : Blind spot is insensitive to both dim light and bright light so no image is formed on it.

Reason : Optic nerve arises from the blind spot.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: B

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7. Assertion : Cornea cannot be easily transplanted from one person to another.

Reason : Cornea immediately initiates immunorejection as stimulates immune system of the recipient.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: D

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8. Assertion : Cones of retina help in colour vision.

Reason : Different types of cones are stimulated by different radiations of the visible light.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: A

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9. Assertion : Acetylcholine participates in the nerve impulse transmission across a synapse.

Reason : Acetylcholine is secreted by adrenergic fibres.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: C

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10. Read the assertion and reson carefully to mark the correct option out of the options given below:

Assertion : Transmission of the nerve impulse across a synapse is accomplished by neurotransmitters.

Reason : Transmission across a synapse usually requires neurotransmitters because there is small space i.e. synaptic cleft, that seperates one neuron from another.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: A

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11. Assertion : Hair cells on the basilar membrane (organ of Corti) are responsible for hearing.

Reason : Pressure waves, which begin at the oval windows, cause the basilar membrane to vibrate so that the cilia of the hair cells touch the tectorial membrane. This causes the hair cells to initiate nerve impulses, which are carried by the auditory nerve to the brain.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: A

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12. Assertion : hearing aids help the hearing impaired to hear.

Reason : They make sound travel through skull bones.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: C

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13. A : The imbalance in the concentration of Na^+, K^+ and proteins generates the resting potential.

R : To maintain the unequal distribution of Na^+ and K^+, the neurons use electrical energy .

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: C

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14. Assertion : Owls can move freely during night.

Reason : They have large number of rods on their retina.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: A

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15. Read the assertion and reson carefully to mark the correct option out of the options given below:

Assertion : The imbalance in concentration of Na^+, K^+ and proteins generates resting potential.

Reason : To maintain the unequal distribution of Na^+ & K^+, the neurons use electrical energy.

A. If both Assertion and Reason are true and the Reason is a correct explanation of the Assertion.

B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: C

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Competition File Objective Type Questions E Additional Multiple Choice Questions

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

A. Movement of eye ball

B. Swallowing

C. Movement of tongue

D. Movement of neck

Answer: A

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2. One of the following example of action of autonomic nervous system is :

A. Knee-jerk reflex

B. Pupillary reflex

C. Swallowing of food

D. Peristalsis of intestine

Answer: D

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3. Four healthy people in their twenties got involved in injuries resulting in damage and death of few cells of the following. Which of the cells are least likely to be replaced by new cells

A. Liver cells

B. Neurons

C. Malpighian layer of skin

D. Osteocytes

Answer: B

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4. Which of the following is released by parasympathtic nervous system?

A. Serotonin

B. Acetylcholine

C. Epinephrine

D. Nor epinephrine

Answer: B

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5. Internal ear is filled with

A. Perilymph

B. Endolymph

C. Lymph

D. Both (a) and (d)

Answer: B

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6. Rods and cones are modified:

A. Multipolar neurons

B. Unipolar neurons

C. Bipolar neurons

D. None of these

Answer: C

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7. Sense of smell is perceived by

A. Pituitary

B. Hypothalamus

C. Olfactory lobes

D. Cerebrum

Answer: C

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8. Corpus callosum is formed between two :

A. Cerebral hemispheres

B. Auricles

C. Ventricles

D. Kidneys

Answer: A

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9. Which part of human brain has centre for controlling breathing?

A. Cerebrum

B. Cerebellum

C. Diencephalon

D. Medulla oblongata

Answer: D

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10. Which part of nervous system controls the reflex activity of the body?

A. Vermis

B. Pons

C. Spinal cord

D. Corpus callosum

Answer: C

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11. Tree of life is

A. Arbor vitae

B. Pons Varolii

C. Organ of Corti

D. Diencephalon

Answer: A

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12. Nerve cells do not divide because they do not have :

A. Nucleus

B. Centrosome

C. Golgi body

D. Mitochondria

Answer: B

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13. In after cutting through the dorsal root of a spinal nerve of a mammal, an associated receptor in the skin were simulated, the animal would

A. Show no response

B. Still be able to feel the stimulation

C. Show a normal but slow response

D. Respond but only at different level of spinal cord

Answer: A

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14. Ora serrata is

A. Gland present in the oral cavity of frog

B. A part of third wall of retina of eye

C. Present in utriculus of ear

D. Oral cavity of protochordates

Answer: B

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15. Which set of ions is necessary for the nerve impulse conduction?

A. Na^+ and K^+

B. Na^{+} and Ca^{++}

C. Ca^{++} and K^{+}

D. Na^{+} and Mg^{++}

Answer: A

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

A. Cerebrum

B. Spinal cord

C. Cerebellum

D. Medulla oblongata

Answer: B

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17. Arbor vitae is a part of

A. Cerebrum

B. Cerebellum

C. Mid brain

D. Fore brain

Answer: B

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18. Hypothalamus does not control

A. Libido

B. Osmoregulation

C. Thermoregulation

D. Thinking and consciousness

Answer: D

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19. Reflex action is controlled by :

A. Spinal cord

B. Craniosacral outflow

C. ANS

D. PNS

Answer: A

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20. Bowman's glands are found in

A. Olfactory epithelium

B. External auditory canal

C. Cortical nephrons only

D. Juxtamedullary nephrons

Answer: A

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

A. Acetylcholine

B. Epinephrine

C. Norepinephrine

D. Cortisone

Answer: D

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22. Given below is a table camparing the effect of sympathetic and parasympathetic nervous system for four features (a-d). Which one feature is correctly described

	Feature	Sympathetic Nervous system	Parasympathetic Nervous System
(a)	Salivary gland	Stimulates secretion	Inhibits secretion
(b)	Pupil of the eye	Dilate	Constricts
(c)	Heart rate	Decreases	Increases
(d)	Intestinal peristalsis	Stimulates	Inhibits

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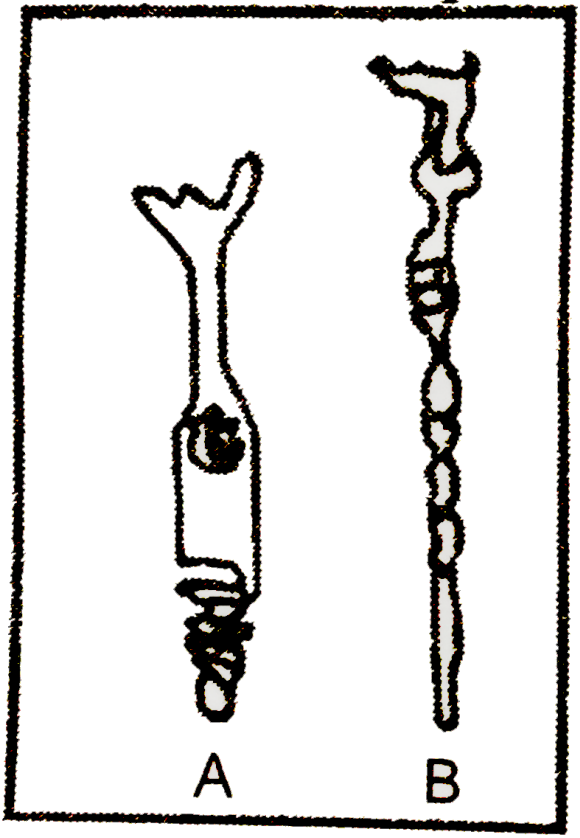
23. Examine the diagram of the two cell types A and B given below and select the correct option.



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24. Nodes of Ranvier are found in

A. Non-myelinated nerve fibres

B. Myelinated nerve fibres

C. Both (a) and (b)

D. None of the above

Answer: B

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25. Nissl's granules are present in

A. RBC

B. WBC

C. Both (a) and (b)

D. Nerve cells

Answer: D

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26. Trigeminal nerve in frog is :

A. 4th

B. 5th

C. 8th

D. 9th

Answer: B

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27. Post-ganglionic nerve fibres of sysmpathetic system are

A. Adrenergic

B. Cholinergic

C. Both (a) and (b)

D. None of above

Answer: A

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28. The supporting and nutritive cells found in the brain are

or

Ventricles of brain are lined by the cells called

A. Ependymal cells

B. Microglia

C. Astrocytes

D. Oligodendrocytes

Answer: C

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29. Fifth cranial nerve of frog is called

A. Optic

B. Vagus

C. Trigeminal

D. Ophthalmic

Answer: C

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30. Eustachian tube is present between :

A. Inner ear & larynx

B. Middle ear & pharynx

C. Outer ear & pharynx

D. Middle ear & larynx

Answer: B

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31. Adaptation to colour vision occurs in

A. Mammals

B. Aves

C. Reptiles

D. All of these

Answer: D

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32. Facial nerve arising from medulla is

A. Motor

B. Sensory

C. Mixed

D. All of these

Answer: C

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33. Eye lens focusses light on retina containing rod cells which are photoreceptors. Number of rod cells in eyes is :

A. 120 million

B. 115 million

C. 150 million

D. 118 million

Answer: A

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34. The receptor absent in tongue is :

A. Thermoreceptor

B. Gustatoreceptor

C. Photoreceptor

D. None of these

Answer: C

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35. End bulb of Ruffini is associated with:

A. Heat

B. Cold

C. Touch

D. Pressure

Answer: A

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36. A typical value of resting membrane potential is

A. $-40mV$

B. $-60mV$

C. $-70mV$

D. $-90mV$

Answer: D

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37. The decoding and interpretation of visual informations are carried by :

A. Cerebellum

B. Frontal lobe

C. Parietal lobe

D. Occipital lobe

Answer: D

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Chapter Practice Test

1. Give the technical name for mode of conduction of nerve impulses along medullated nerve fibre.

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2. Define synapse.

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3. Which part of eye gives colour to eye?

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4. Name the ear ossicles from outer to inner side of middle ear.

Watch Video Solution

5. Give the location of Bowman's glands.

Watch Video Solution

6. Define reflex actions. What is their significance?

Watch Video Solution

7. Give the location and function of ceruminous glands.

Watch Video Solution

8. Enlist four peculiar features of human brain.

Watch Video Solution

9. Differentiate between blind spot and yellow spot of eye.

Watch Video Solution

10. Describe various lobes of cerebrum of human brain and their functions.

Watch Video Solution

11. Write a note on vestibular apparatus of internal ear.

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