



BIOLOGY

BOOKS - SANTRA BIOLOGY (BENGALI ENGLISH)

NEURAL CONTROL AND CO- ORDINATION

Objective Type Questions

1. How many pairs of cranial nerves are found in a human?

A. 12

B. 31

C. 25

D. 10

Answer: A



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2. The structures in a human that provide balance are located in the

A. middle ear

B. eustachian tube

C. inner ear

D. pinna

Answer: C



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3. Neurotransmitter diffuses across a

A. chemical synapse

B. channel protein

C. myelin sheath

D. both (a) and (b)

Answer: A



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4. A nerve may consist of bundled-together axons of

A. sensory and motor neurons

B. cochlea

C. semicircular canals

D. malleus, incus and stapes

Answer: A



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5. The part of the ear where sound is transduced is

A. tympanic membrane

B. cochlea

C. semicircular canals

D. malleus, incus and stapes

Answer: B



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6. Cerebral hemispheres are the centres of

A. taste

B. balance

C. smell

D. thinking

Answer: D



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7. The resting membrane potential is maintained by

A. neurotransmitters

B. ion pumps

C. ion leaks

D. both (a) and (c)

Answer: D



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8. Which of the following is not a component of the reflex arc?

A. effector

B. plexus

C. receptor

D. motor neurone

Answer: B



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9. Each sensory system consists of

A. nerve pathways from specific receptors
to the brain

B. sensory receptors

C. brain regions that deal with sensory
information

D. all of the above

Answer: D



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10. Which of the following receptors is incorrectly paired with its category?

A. gustatory receptor-chemoreceptor

B. nociceptor-deep pressure receptor

C. hair cell-mechanoreceptor

D. rod-photoreceptor

Answer: B



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11. All of the following electrical charges of neurones are graded events except

A. IPSPs

B. EPSPs

C. action potentials

D. depolarizations caused by stimuli

Answer: D



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12. A bundle of fibres found outside the CNS is known as

A. meninx

B. dendrite

C. nerve

D. tract

Answer: C



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13. The outer layer of the human eyeball includes the

A. retina

B. lens and choroid

C. sclera and cornea

D. both (a) and (c)

Answer: C



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14. Which of the following with regard to function of the CSF?

- A. protection
- B. nerve transmission
- C. circulation
- D. both (a) and (c)

Answer: D



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15. Which of the following are chemical receptors?

A. olfactory receptors

B. auditory receptors

C. taste receptors

D. both (a) and (c)

Answer: D



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16. Detecting light energy is the function of

- A. thermoreceptors
- B. photoreceptors
- C. mechanoreceptors
- D. chemoreceptors

Answer: B



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17. The inner layer of the human eyeball includes the

- A. lens and choroid
- B. sclera and cornea
- C. retina
- D. both (a) and (b)

Answer: C



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18. Which of the following detect mechanical energy associated with changes in pressure, position or acceleration?

- A. photoreceptors
- B. thermoreceptors
- C. chemoreceptors
- D. mechanoreceptors

Answer: D



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19. The cervical plexus supplies the

- A. head and shoulders
- B. head, neck and shoulders
- C. abdominal regions
- D. upper extremities

Answer: B



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20. Impulses sent from the CNS out to an effector travel by way of the

A. association neurone

B. sensory neurone

C. motor neurone

D. ascending tracts

Answer: C



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21. Which of the following is not a sympathetic effect?

A. increased blood pressure

B. increased heart rate

C. increased constriction of blood vessels

D. increased storage of glycogen from
glucose

Answer: D



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22. Retina is

- A. part of rhodopsin
- B. sensitive to light energy
- C. found in both rods and cones
- D. all of these

Answer: B



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23. Which of the following receptor classifications could be considered enteroreceptors ?

- A. photoreceptors
- B. visceroreceptors
- C. chemoreceptors
- D. both (b) and (c)

Answer: D



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24. Which of the following gives an incorrect function for the structure?

A. iris-regulation of amount of light

B. sclera-protection

C. choroid-location of cones

D. lens-focussing

Answer: C



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25. A spinal nerve takes nerve impulse

- A. away from CNS
- B. only inside the CNS
- C. both to and away from CNS
- D. to the CNS

Answer: C



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26. The autonomic system has two divisions called

A. CNS and PNS

B. efferent and afferent system

C. somatic and skeletal system

D. sympathetic and parasympathetic system

Answer: D



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27. Equilibrium and activities of the muscles and joints are monitored by

- A. tactile receptors
- B. gustatory receptors
- C. proprioceptors
- D. olfactory receptors

Answer: C



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28. Transmission of nerve impulse across a synapse is accomplished by the

A. release of neurotransmitters

B. movement of Na^+ and K^+

C. both are correct

D. neither of these is correct

Answer: A



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29. Which of the following is mismatched?

A. utricle and saccule-outer ear

B. ossicles-middle ear

C. semicircular canals-inner ear

D. auditory canal-outer ear

Answer: A



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30. Both olfactory receptors and sound receptors have cilia, and they both

A. are mechanoreceptors

B. initiate nerve impulses

C. are chemoreceptors

D. all of these

Answer: B



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31. Which of the following is not related to light perception?

A. rhodopsin

B. perilymph

C. choroid

D. lens

Answer: B



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32. The most extensively developed region of most mammalian brains is

A. optic chiasma

B. midbrain

C. hypothalamus

D. cerebrum

Answer: D



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33. Which of the following is not a site of transduction in some sensory structure?

A. organ of corti

B. olfactory hair cells

C. macula

D. ganglion cells

Answer: D



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34. The ability to perceive pheromones is related to the sense of

A. olfaction

B. gustation

C. equilibrium

D. audition

Answer: A



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35. For which of the following stimuli there is no known sensory structure in living organisms?

A. pressure

B. vibrations

C. radio waves

D. magnetic fields

Answer: C



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36. Which of the following is not a type of tactile sensation?

A. touch

B. pressure

C. vibration

D. heat

Answer: D



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37. Deformation of sensory dendrites is required to establish a nerve impulse in all of the following except

- A. organ of corti
- B. lateral line organs
- C. gustatory hair cells
- D. pacinian corpuscles

Answer: C



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38. Electrical synapses

A. are not as sensitive to temp as are
chemical synapses

B. rapidly transmit impulses

C. allow impulses to pass in either
direction

D. all of the above

Answer: D



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39. Which of the following pairs is not matched correctly?

A. mechanoreceptors-joint position

B. enteroreceptors-internal environment

C. nociceptors-pain

D. enteroreceptors-external environment

Answer: A



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40. A receptor

- A. is the first portion of a reflex arc
- B. responds to only one type of stimulus
- C. initiates nerve impulses
- D. all of these

Answer: D



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41. Which of the following is not associated with the path of sound vibrations?

A. tympanic membrane

B. cochlea

C. semicircular canals

D. auditory canal

Answer: C



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42. Which of the following contains mechanoreceptors?

- A. lateral line of fishes
- B. human skin
- C. statocytes of arthropods
- D. all of these

Answer: D



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43. Which of the following is mismatched ?

A. thalamus-motor and sensory centres

B. cerebellum-motor coordination

C. cerebrum-consciousness

D. hypothalamus-internal environment
regulation

Answer: A



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44. Which of the following associations is incorrect?

- A. lateral line-fishes
- B. statocysts-sea stars
- C. compound eye-arthropods
- D. camera type eye-squid

Answer: B



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45. Synaptic vesicles are seen

- A. at the ends of axons only
- B. along the length of all long fibres
- C. at the ends of dendrites and axons
- D. all of the above

Answer: A



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46. Which of the following are the first and last elements in a spinal reflex?

- A. sense organ and muscle effector
- B. motor neurone and sensory neurone
- C. axon and dendrite
- D. ventral horn and dorsal horn

Answer: A



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47. Many portions of the CNS exert control over ANS. Major control and integration of ANS occur in what portion of the brain?

A. cerebral cortex

B. hypothalamus

C. cerebellum

D. brain stem

Answer: B



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48. A sensory neurone enters the spinal cord from the

A. posterior root

B. superior root

C. lateral horn

D. anterior root

Answer: A



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49. The autonomic ganglion, which houses the synapse for parasympathetic division of the ANS, is the

- A. terminal ganglion
- B. prevertebral ganglion
- C. parasympathetic trunk ganglion
- D. sympathetic trunk ganglion

Answer: A



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50. The parasympathetic division of ANS

A. is concerned with conserving and restoring energy

B. has ganglia near or within visceral effectors

C. arises from the cranial and sacral spinal cord segment

D. all of the above

Answer: D



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51. _____ is a decrease in the response to an ongoing stimulus

A. visual accommodation

B. perception

C. sensory adaptation

D. both (a) and (b)

Answer: C



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52. The following detects infrared energy (heat)

- A. photoreceptors
- B. thermoreceptors
- C. chemoreceptors
- D. mechanoreceptors

Answer: B



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53. vision requires

A. a tissue with dense arrays of photoreceptors

B. image-forming centres in brain

C. eyes

D. all of the above

Answer: D



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54. The ascending and descending tracts of the spinal cord

A. convey sensory and motor information

to and from the brain

B. serve as origins for the cranial meninges

C. consist entirely of gray matter

D. travel in the horns of the spinal cord

Answer: A



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55. The term grey matter refers to

- A. axons that are myelinated
- B. neurones that are myelinated
- C. neurones that are unmyelinated
- D. dendrites that are myelinated

Answer: C



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56. The rods and cones of vertebrate retina function to

A. transduce light

B. filter light

C. amplify light

D. focus light

Answer: A



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57. Grey matter is _____.

- A. located on the outside of spinal cord
- B. populated by cell bodies of neurones
- C. restricted to the brain
- D. found in the ventricles of the vertebrate
brain

Answer: B



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58. Receptor sites for neurotransmitters are located on the

A. postsynaptic membrane

B. presynaptic membrane

C. membranes of synaptic vesicles

D. axon membranes in the regions of the node of Ranvier

Answer: C



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59. Cells of the nervous system that are specialized to provide support and protection known as

A. schwann cells

B. neuroglia

C. axons

D. neurones

Answer: B



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60. Parasympathetic and sympathetic nerves _____ to bring about minor adjustments in internal organ activity

A. work antagonistically most often

B. come into play only during a fight-flight response

C. service entirely on different internal organs

D. none of these

Answer: A



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61. The cerebellum is concerned with

A. vision

B. memory

C. perception

D. coordination of muscular movements

Answer: D



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62. Thirst is a primary stimulus for the intake and maintenance of body fluids. The centre for thirst is located in the

- A. hypothalamus
- B. adrenal cortex
- C. cerebral cortex
- D. liver

Answer: A



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63. Which of the following is not involved in transmission of a nerve impulse across a chemical synapse?

A. calmodulin

B. synapsin

C. acetylcholinesterase

D. calcium ions

Answer: C



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64. Action potentials occur when

- A. sodium gates open in an ever accelerating way
- B. a neurone receives adequate stimulation
- C. sodium-potassium pumps kick into action
- D. both (a) and (b)

Answer: D



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65. Portions of the nervous system are specialized to detect change in the internal and external environments. Which of the following functions best fits this description?

A. motor

B. sensory

C. intuitive

D. integrative

Answer: B



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66. If the nervous system, after receiving information, interprets the information and decides how it might respond, it's relying on the _____ function.

A. sensory

B. motor

C. responsive

D. integrative

Answer: D



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67. The speed at which impulses are conducted increases with

A. increasing branching of dendrites

B. increasing diameter of the axon

C. increasing number of dendrites

D. increasing diameter of soma

Answer: B



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68. How many pairs of spinal nerves are found in a human?

A. 12

B. 31

C. 8

D. 25

Answer: B



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69. The _____ is the centre of planning movements and blocking unsuitable behaviour and also has roles in memory.

A. motor cortex

B. prefrontal cortex

C. visual cortex

D. somato sensory cortex

Answer: B



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70. The cranial nerves in humans that send parasympathetic stimulation to, among other organs, the heart, stomach and liver are

- A. abducens nerves
- B. glossopharyngeal nerves
- C. vagus nerves
- D. trigeminal nerves

Answer: C



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71. Structurally, what are olfactory nerve cells?

- A. unipolar neurons

B. neurochemically specialized neurons

C. multipolar neurons

D. bipolar neurons

Answer: D



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72. Golgi tendon is the sensory structure formed at the junction of

A. muscles and tendon

B. two bones

C. two nerves

D. nerve and muscles

Answer: A



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

A. cornea

B. retina

C. macula lutea

D. choroid

Answer: C



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74. Adrenaline and noradrenaline are hormones and also act as

A. energy storing substances

B. neurotransmitters

C. food storage materials

D. energy producing agents

Answer: B



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75. Receptors of sensation produced when a person eats red chillies are located on which part of tongue?

A. base

B. sides

C. tip

D. none of these

Answer: D



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76. Pons, cerebellum and medulla constitutes

A. hind brain

B. telencephalon

C. mid brain

D. fore brain

Answer: A



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77. Ventricles of brain are filled with a fluid called

A. plasma

B. cerebrospinal fluid

C. endolymph

D. lymph

Answer: B



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78. Broca area of speech is found in

A. temporal and occipital lobes

B. parietal lobe

C. parietal lobe and partly in temporal lobe

D. temporal lobe

Answer: C



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79. All sensory pathways to cerebral cortex synapse at

A. pons

B. hypothalamus

C. cerebellum

D. thalamus

Answer: A



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80. Cutaneous plexus and papillary plexus consists of

A. gland cells that release cutaneous secretions

B. a network of arteries providing dermal supply

C. specialized cells for cutaneous sensation

D. network of nerves providing dermal sensation

Answer: B



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81. Glands whose secretions pick up odoriferous substances to stimulate olfactory nerves are

A. Meibomian glands

B. Bidder's glands

C. Bowman's glands

D. Cowper's glands

Answer: C



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82. Which one is not a reflex action?

A. perspiration due to heat

B. closing of eye lids suddenly

C. obeying the order to run

D. release of saliva on seeing sweets

Answer: C



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83. Voluntary muscle movements are controlled by centres present in

A. parietal lobe

B. frontal lobe

C. cerebellum

D. occipital lobe

Answer: A



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84. Adrenaline is equivalent to neurotransmitter

A. serotonin

B. GABA

C. nor-epinephrine

D. epinephrine

Answer: D



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85. Thermoregulatory centre or thermostat in the body of homeothermal animals and man is found in

A. Diencephalon

B. hypothalamus

C. pituitary

D. skin

Answer: B



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86. High frequency sound waves vibrate basilar membrane

A. from oval window to helicotrema

B. near oval window

C. near helicotrema

D. in middle of cochlea

Answer: B



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87. Appetite and satiety centres of brain are present in

A. cerebellum

B. cerebral hemispheres

C. medulla oblongata

D. hypothalamus

Answer: D



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88. Lungs, heart, larynx, stomach, intestine etc are supplied by cranial nerve

A. abducens

B. vagus

C. oculomotor

D. trigeminal

Answer: B



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89. The chemical causing transmission of nerve impulse across synapse or end plate is

- A. acetylcholine
- B. cholinesterase
- C. adrenaline
- D. choline

Answer: A



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90. A man is suffering from abnormally low body temperature, loss of appetite and extreme thirst his brain scan is liable to show tumour in

A. medulla oblongata

B. pons

C. hypothalamus

D. cerebellum

Answer: C



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91. Coordination of hand-eye or voluntary muscle activity is connected with

- A. Crura cerebri
- B. Medulla oblongata
- C. Cerebrum
- D. Cerebellum

Answer: D



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92. Lateral ventricles are connected to third ventricle through

A. Foramen of monro

B. Filum terminale

C. Iter

D. Corpus striatum

Answer: A



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93. Which does not act as neurotransmitter?

- A. Epinephrine
- B. Cortisone/Tyrosine
- C. Norepinephrine
- D. Acetylcholine

Answer: B



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94. The correct pair of cervical nerves and cervical vertebrae is

A. 7, 16

B. 7, 7

C. 16, 7

D. 8, 7

Answer: D



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95. Characteristics of graded potential is

- A. Duration and strength varies
- B. All or none response
- C. Always followed by a refractory period
- D. Amplitude is always the same

Answer: A



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96. Which part of human brain is largest?

A. cerebellum

B. cerebrum

C. medulla

D. thalamus

Answer: B



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97. Which foramen is paired in mammalian brain?

A. Foramen of luschka

B. Foramen of monro

C. Foramen of magendie men

D. Interventricular foramen

Answer: A



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98. Match the columns

Column I	Column II
A. Fovea	1. provides opening for entry of light
B. Iris	2. transduces RBG light
C. Pupil	3. transmits information to CNS
D. Lens	4. controls amount of light entering
E. Optic nerve	5. focuses light on retina



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99. Specific part of hypothalamus, responsible for physiological sweat secretions

A. Para ventricular nucleus

B. Median eminence

C. Supra-optic nucleus

D. Pars distalis

Answer: B



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100. Which is thickened to form Organ of Corti?

A. Basilar membrane

B. Tectorial membrane

C. Reissner's membrane

D. all the above

Answer: A



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101. The intensity levels of whispering noise is

A. 50-55 dB

B. 10-15 dB

C. 20-40 dB

D. 45-50 dB

Answer: C



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102. The size of pupil is controlled by

A. Suspensory ligament

B. Cornea

C. Iris muscles

D. Ciliary muscles

Answer: C



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103. A 22 years student goes to his ophthalmologist. He has problem in reading books because he is not able to contract his

A. Pupil

B. Ciliary muscles

C. Suspensory ligament

D. Iris

Answer: B



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104. MRI is not allowed in the following conditions except one identify the exception

A. pregnant women

- B. presence of metallic plate in the body
for treatment of broken bones
- C. presence of MRI conditional pacemaker
in the body
- D. person suffering from stroke

Answer: C



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105. Which of the following is not an effect of the sympathetic nervous system?

- A. elevation of blood pressure
- B. stimulation for saliva secretion
- C. dilation of pupil
- D. inhibition of peristalsis

Answer: B



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

A. Wernicke's area

B. Borca's area

C. Association area

D. Motor area

Answer: A



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107. In Myasthenia gravis acetylcholine

A. secretion from nerve terminals is enhanced

B. receptors on motor end plate are reduced

C. secretion from nerve terminalis is reduced

D. esterase activity is inhibited

Answer: B



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108. 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) Blind spot	Near the place where optic nerves leave the eye	Rods and cones are present but inactive here
(d) Hypothalamus	Fore brain	controls body temperature, urge for eating and drinking



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109. The light sensitive cells of eye are present in

A. Lysozyme

B. Opsin

C. Lysosome

D. Transducin

Answer: C



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110. The bacterial protein present in human tears is

A. Lysozyme

B. Opsin

C. Lysosome

D. Transducin

Answer: A



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111. Which one of the following cranial nerves is carrying the nerve fibres originating from the Edinger-Westphal nucleus?

A. Trochlear

B. Abducens

C. Vagus

D. Oculomotor

Answer: D



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112. The human hind brain comprises of three parts, one of which is

A. Cerebellum

B. Hypothalamus

C. Spinal cord

D. Corpus Callosum

Answer: A



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113. The nerve centres which control the body temperature and the urge for eating are contained in

A. Thalamus

B. Hypothalamus

C. Pons

D. Cerebellum

Answer: B



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114. Which of the following is not related to the autonomic nervous system?

A. excretion

B. memory and learning

C. peristalsis

D. digestion

Answer: D



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115. The complex system of the inner ear associated with maintenance of body balance is

- A. Oval window
- B. Resissner's membrane
- C. Cochlea
- D. Vestibular apparatus

Answer: D



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

A. ten

B. eight

C. six

D. four

Answer: C



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117. Which of the following nerves innervates alimentary canal?

A. Trigeminal

B. Abducens

C. Vagus

D. Oculomotor

Answer: C



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118. Which of the following structures is ectodermal in origin?

A. Lungs

B. Notochord

C. Kidneys

D. Brain

Answer: D



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

A. Vitamin A

B. Vitamin B

C. Vitamin C

D. Vitamin D

Answer: A



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

A. Ganglion cells, bipolar cells, photoreceptor cells

B. Ganglion cells, photoreceptor cells, bipolar cells

C. Bipolar cells, photoreceptor cells, ganglion cells

D. Ganglion cells, rods, cones

Answer: A



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121. Which of the following statements are correct and incorrect ?

1. Non-myelinated nerve fibre is enclosed by a schwann cell that does not form a myelin sheath.
2. Synaptic cleft of neurons secrete adrenaline.
3. Spinal cord and cranial nerves are made of non-myelinated nerve fibres..

4. Myelinated nerve fibres are enveloped with schwann cells, which form a myelinated sheath around the axon.

A. 1, 2, 3 are correct but 4 is incorrect

B. 1, 4 are correct while 2, 3 are incorrect

C. 2, 3 are correct while 1, 4 are incorrect

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

Answer: B



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122. The human hind brain comprises of three parts, one of which is

- A. Cerebellum
- B. Hypothalamus
- C. Spinal cord
- D. Corpus callosum

Answer: A



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123. A normal visioned man whose father was colour blind, marries a woman whose father was also colour blind. They have their first child as a daughter. What are the chances that this child would be colour blind?

A. 25%

B. 50%

C. 100

D. Zero percent

Answer: D



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124. What was the most significant trend in the evolution of modern man (*Homo sapiens*) from his ancestors?

- A. Increasing cranial capacity
- B. Upright posture
- C. Shortening of jaws
- D. Binocular vision

Answer: A



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

- A. Vestibular apparatus
- B. Ear ossicles
- C. Eustachian tube
- D. Organ of corti

Answer: A



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126. A person entering an empty room suddenly finds 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. Hypothalamus activates the parasympathetic division of brain

B. Sympathetic nervous system is activated releasing epinephrin and norepinephrin from adrenal cortex

C. Sympathetic nervous system is activated releasing epine- phrine and noreppinephrin from adrenal medulla

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

Answer: C



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127. The extinct human who lived 1,00,000 to 40,000 years ago, in Europe, Asia and parts of Africa with short stature, heavy eye brows, retreating fore head, large jaws with heavy teeth, stocky bodies, a lumbering gait and stooped posture was

A. Cro-magnan humans

B. Ramapithecus

C. Homo habilis

D. Neanderthal human

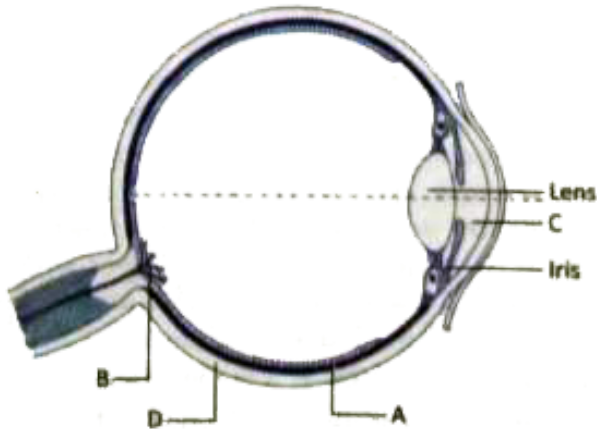
Answer: D



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128. Parts A, B, C, D of the human eye are shown in the diagram. Select the option which gives correct identification along with the

functions/characteristics :



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

B. B-blind spot-has only a few rods & cones

C. D-choroid-its anterior part forms ciliary
body

D. A-retina-contains photoreceptors-rod
and cones

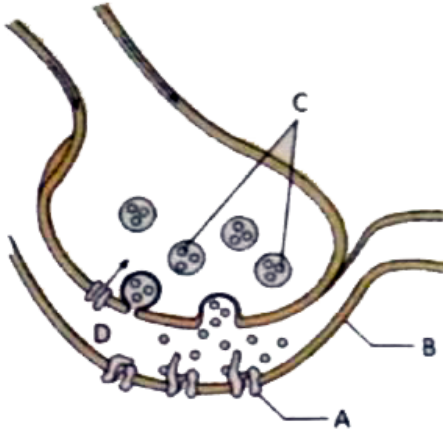
Answer: D



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129. A diagram showing axon terminal and synapse is given. identify correctly at least two

of A-D



A. A receptor, C-synaptic vesicle

B. A-neurotransmitter, B-synaptic cleft

C. C-neurotransmitter, D- Ca^{++}

D. B-Synaptic connection, D- K^{+}

Answer: A



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130. Which excitatory neurotransmitter is involved in the transmission of impulse at the neuromuscular junction?

- A. Epinephrine
- B. Serotonin
- C. Acetylcholine
- D. Glycine

Answer: C



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131. Stimulation of a muscle fibre by a motor neuron occurs at

- A. the neuromuscular junction
- B. the transverse tubules
- C. the myofibril
- D. the sarcoplasmic reticulum

Answer: A



132. The bundle of axons in the central nervous system is

A. nerve

B. ganglion

C. tract

D. neuron

Answer: C



133. Which one of the following is the functional unit of hearing?

- A. Utricle
- B. Organ of zuckermandl
- C. Organ of corti
- D. Vestibular apparatus

Answer: C



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134. Which one of the following is NOT a refractive medium of the eye?

A. lens

B. vitreous humor

C. aqueous humor

D. pupil

Answer: D



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

- A. norepinephrine
- B. γ aminobutyric acid
- C. acetylcholine
- D. dopamine

Answer: B



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136. Which one of the following acts slowly as an inhibitory neurotransmitter?

- A. Nor-epinephrine
- B. γ aminobutyric acid
- C. Acetylcholine
- D. Dopamine

Answer: B



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137. Cerebrum is a part of

A. Mesencephalon

B. Metencephalon

C. Prosencephalon

D. Myelencephalon

Answer: C



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138. Acetylcholine is a

A. Hormone

B. Brain peptide

C. Neurotransmitter

D. Digestive system

Answer: C



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139. Vagus nerve is a

A. V cranial nerve

B. VI cranial nerve

C. IX cranial nerve

D. X cranial nerve

Answer: D



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140. Photosensitive compound in human eye is made up of

A. Opsin and retinal

B. Transducin

C. Opsin and retinol

D. Guanosine and retinol

Answer: A



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141. Choose the correct statement

A. Receptors do not produce graded potentials

B. Nociceptors respond to changes in pressure

C. Meisner's corpuscles are thermoreceptors

D. Photoreceptors in human eye are depolarized in response to the light stimulus

Answer: D



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142. The role of choroid plexus is

- A. Homeostasis
- B. Circulation of CSF
- C. Source of CSF
- D. Maintian CSF pressure

Answer: C



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143. Myelin sheath is produced by

- A. Astrocytes and schwann cells
- B. Oligodendrocytes and osteoclast
- C. Osteoclasts and Astrocytes
- D. Schwann cell and oligodendrocytes

Answer: D



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144. Receptor sites for neurotransmitters are present on

- A. Pre-synaptic membrane
- B. Tips of axon
- C. Post synaptic membrane
- D. Membrane of synaptic vesicles

Answer: C



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145. Which of the following pairs are correct?

A. Frontal lobe- voluntary movement

control of skeletal muscles

B. deuteranopia-Red-green colour

blindness

C. Glucoma-it is an increase of intraocular

tension when the pressure is raised

above normal level

D. Rhinitis-inflammation of the nasal mucous

membrane

Answer: A::B::C::D



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146. Which of the following are the functions of hypothalamus?

- A. relaxation of pupil
- B. increase heart rate
- C. decrease blood sugar level
- D. relaxation of detrussor muscles

Answer: A::C::D



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147. Which of the following pairs are correct?

A. Agraphia-Failure to write

B. Amnesia-Loss of memory

C. Anaesthesia-Loss of feeling

D. Otolagia-Ear pain

Answer: A::B::C::D



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148. Which of the following pairs are correct?

- A. Scala tympani-perilymph
- B. Scala media-Endolymph
- C. hair cells-receptor cells of ear
- D. cristae ampullaris-sensory area

Answer: A::B::C::D



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149. Which of the following pairs are correct?

A. Sympathetic nerves fibres thoracic

lumber out flow

B. Parasympathetic nerves fibres cranial

sacral out flow

C. Motor end plate-muscle fibre

D. Dorsal root ganglion-spinal nerve

Answer: A::B::C::D



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150. What are correct about control of 'Broca area'?

A. breathing

B. movement of teeth

C. movement of tongue

D. movement of vocal cords

Answer: C::D



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151. Pick the correct statements

A. preganglionic nerve fibres of III, VII, IX and X cranial nerves form part of parasympathetic

B. V, VI, VIII and X cranial nerves are mixed nerves

C. Trochlear nerves are largest cranial nerves

D. Abducens nerves are motor and originate from gasserian ganglion

Answer: A::B



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152. Which of the following are correct?

A. synaptic cleft of neurons secrete
adrenalin

B. myelinated nerve fibres are enveloped with schwann cells that secrete myelin sheath around axon

C. non-myelinated nerve fibres are enclosed by schwann cells that do not form myelin sheath

D. spinal cord and cranial nerves are made of non-myelinated nerve fibres

Answer: B::C



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153. Which of the following are correct pairing?

A. Glands of zeis-modified sebaceous glands

B. Harderian glands-modified sweat glands

C. Meibomian glands-modified sebaceous glands

D. Glands of moll-modified sweat glands

Answer: A::C::D



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154. Which of the following are correct pairing?

A. clarke's column-spinal cord

B. pulvinar nucleus-thalamus

C. medulla oblongat-metencephalon

D. substantia nigra-cerebral peduncles

Answer: A::B::D



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155. Which of the following are correct

A. perception is the conscious awareness
and interpretation of sensation

B. dancers and sport person are able to
maintain their proper body position by
using their internal sense of balance

C. each eye weighs only 7 gms

D. embedded in the tarsal plate of eyelid is

row of elongated modified sebaceous

glands called meibomian glands

Answer: A::C::D



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156. Which of the following are the actions of medulla?

- A. it acts as relay centre for sensory and motor nerve tracts
- B. it controls heart rate and blood pressure
- C. it controls respiration as respiratory centre located on it
- D. it helps the secretion of saliva and other digestive juice

Answer: A::B::C::D



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157. Watery fluids present inside the internal ear is known as _____ and _____



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158. _____ pigment enables us to see in the dark.



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159. _____ connects the cavity of the middle ear with pharynx.



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160. The junction of two neurones is called _____.



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161. An action potential is initiated each time the membrane potential is raised to _____ potential.



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162. _____ receive information from sensory receptors & transmit it to the CNS.



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163. The rods are sensitive to _____ light.



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164. The conversion of environmental energy into the electrochemical energy of neurones is called _____



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165. The nerves carrying impulse messages from the CNS to the effectors are called _____



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166. Nervous system has two main functions :
to initiate coordinate responses to the _____
and to maintain _____



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167. The rods of the retina are sensitive to bright light.



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168. Impulses travel much more rapidly along myelinated nerve.



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169. The action potential (spike) obeys the all-or-none law.



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170. All nerve fibres arising from the spinal cord are mixed nerve fibres.



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171. The resting potential is maintained largely by the sodium pump.



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172. ANS is completely independent of CNS.



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173. Cerebellum control posture and equilibrium.



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174. Peripheral nervous system consists of sympathetic and parasympathetic nervous system.



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175. Membranous labyrinth float in the endolymph.



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176. Extracellular fluid present in subarachnoid space and the ventricles of spinal cord is known as cerebrospinal fluid.



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Very Short Answer Type Questions

1. Which pigment enable us to see in dark?



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2. What is the origin of Ach?



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3. Give technical term for the kind of conduction of nerve impulse along a myelinated nerve fibre.



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4. Name the enzyme present in tears which prevents eye infection.



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5. Where are the bipolar nerve cells present in the human body?



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6. Which division of the nervous system is voluntary?



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7. In which space does CSF circulate?



[Watch Video Solution](#)

8. Which lobe of the cerebrum is the somesthetic area?



[Watch Video Solution](#)

9. Name the area of retina which contains only cones and no rods.



[Watch Video Solution](#)

10. What is presbyopia?



[Watch Video Solution](#)

11. What are the names of two sacs that lie in vestibule?



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12. Name the part of the brain that contains pyramids and cerebral peduncles.



Watch Video Solution

13. What are the three subdivisions of the bony labyrinth?



Watch Video Solution

14. Give scientific term for adjustment of the eye in order to obtain a clear vision of objects at different distances.



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15. With which type of equilibrium are the maculae mainly concerned?



Watch Video Solution

16. With which type of equilibrium are the semicircular ducts associated?



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17. In a polarised membrane, what is the charge just inside membrane?



Watch Video Solution

18. Tell the contribution of James Longley.



Watch Video Solution

19. Name the neurone which is responsible for one way impulse conduction.



Watch Video Solution

20. Name the fluid in which the membranous labyrinth of the inner ear floats.



Watch Video Solution

21. Tell the functions of ear ossicles.



Watch Video Solution

22. What effect might vagotoms have on emptying of the stomach?



Watch Video Solution

23. Name the two parts with which the ear bone stapes is attached at its opposite ends.



Watch Video Solution

24. What are the effects of increased stimulation of the vagus (X) nerves on the stomach?



Watch Video Solution

25. Name a cranial nerve that controls eye ball movements. Is this nerve a sensory, a motor or a mixed nerve?



Watch Video Solution

26. Why do impulses in a neuron travel in one direction only?



Watch Video Solution

27. What are the three layers of the cranial meninges, from superficial to deep?



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28. What is a typical value for the resting membrane potential of a neurone?



Watch Video Solution

29. Which part of the brain is concerned with maintenance of posture?



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30. What happens if the sympathetic nerve supply to heart is cut off?



Watch Video Solution

31. What transmits messages in form of impulses?



Watch Video Solution

32. Name the part of internal ear i.e., concerned with maintenance of balance.



Watch Video Solution

33. Name the fluid present within cochlear canal.



Watch Video Solution

34. Spinal nerves are part of which division of nervous system?



Watch Video Solution

35. Why is the blind spot devoid of ability for vision?



Watch Video Solution

36. Name the area of the retina which has the brightest vision.



Watch Video Solution

37. Name the part of the brain which performs the function of intelligence and judgement.



Watch Video Solution

38. Name the ear ossicles in the order of arrangement in humans.



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39. Name the terms given to neurones that carry input to CNS and that carry output from CNS.



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40. What is the functional advantage of myelination?



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41. What is the function of pupil and rod cells in human eye?



Watch Video Solution

42. Which sensations can arise when free nerve endings in skin are stimulated?



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Short Answer Type Questions

1. What do you mean by motor end plate?



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2. What is action potential and resting membrane potential?



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3. Define nerve impulse. What is threshold stimulus for a nerve cell?



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4. Write down the two function of cerebellum,
Which jobs of the cerebrum are usually
narrower in left-handed people?



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5. What are adrenergic and cholinergic nerve
fibre?



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6. Define central canal.



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7. State two functions of parasympathetic nervous system.



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8. Define CSF.



Watch Video Solution

9. What do you mean by synapse?



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10. Give an idea about conditioned and unconditioned reflex.



[Watch Video Solution](#)

11. What are Meninges?



[Watch Video Solution](#)

12. Name the three main parts of brain.



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13. What is corpus striatum, filum terminale, Central canal and Synaptic cleft?



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14. What is mid brain? Name its two main divisions.



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15. State the functions of flocculonodular lobe of cerebellum.



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16. Name the nerve centres in brain which receives crude sensations and which controls hunger, thirst and feeding.



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17. State how cerebellum acts as feedback centre.



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18. Name the centres in Pons that control respiration.



Watch Video Solution

19. Which nerve centres in medulla control heart rate and respiration respectively?



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20. What are cranial nerves? Mention the number of cranial nerves in man.



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21. What is substantia Gelatinosa of Rolando?



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22. Name the anatomical divisions of autonomic nervous system.



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23. State the effect of stimulation of sympathetic and parasympathetic nerves on the pupil of eye.



[Watch Video Solution](#)

24. What are Exteroceptors, Interoceptors, Telereceptors and osmoreceptors?



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25. What is conditioned reflex action? Give two examples.



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26. Where are taste buds present? State their functions.



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27. Name the type of reflex in Knee jerk



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28. Name the type of reflex in Circus play



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Differentiation

1. Axon and Dendron.



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2. Afferent and Efferent nerve.



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3. Thalamus and Hypothalamus.



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4. Grey matter and white matter.



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5. Cerebrum and cerebellum.



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6. Medullated nerve fibres and non medullated nerve fibres.



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7. Unconditioned reflex and Conditioned reflex.



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8. Rod and Cone cell.



[Watch Video Solution](#)

Long Answer Type Questions

1. What is nervous system?



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2. What is brain? Where is it located? Name the parts of forebrain.



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3. What is cerebrum? State its functions.



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4. What is Thalamus? Mention its position and state the functions of thalamus.



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5. What is hypothalamus? Mention the nuclei of hypothalamus.



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6. Where is hypothalamus located?



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7. What is spinal cord? Describe the structure of spinal cord.



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8. Mention the position of pons in central nervous system and state its functions.



[Watch Video Solution](#)

9. What is cerebellum? Name the phylogenetic and anatomical divisions of cerebellum.



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10. Name the five main parts of brain. State the functions of medulla.



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11. What is autonomic nervous system?

Mention the characteristics of autonomic nervous system.



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12. State the anatomical origin of sympathetic nervous system. State the functions of sympathetic nervous system.



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13. Why parasympathetic nervous system is called craniosacral? State the functions of parasympathetic nervous system.



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14. State the differences of sympathetic and parasympathetic nervous system.



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15. Describe the ventricles of brain.



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16. What is Cerebro spinal fluid (CSF) ?

Mention its composition and state its functions.



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17. What are receptors? Classify cutaneous receptors with examples.



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18. What is Reflex action? Distinguish between unconditioned (inborn) and conditioned (acquired) reflex actions.



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19. What is Reflex arc? Describe the structure of a reflex arc and state the functions of its different parts.



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20. What is synapse? Name the types of synapse. Mention the properties of synapse.



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21. What is synaptic delay? Give its value?

Describe the structure of Synapse.



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22. Describe the mechanism of synaptic transmission of nerve impulse.



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1. Briefly describe the structure of the following :

Brain



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2. Briefly describe the structure of the following :

Eye



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3. Briefly describe the structure of the following :

Ear



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4. Compare the following :

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



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5. Compare the following :

Resting potential and action potential



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6. Compare the following :

Choroid and retina.



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7. Explain the following process :

Polarisation of the membrane of a nerve fibre



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8. Explain the following process :

Depolarisation of the membrane of a nerve fibre



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9. Explain the following process :

Conduction of a nerve impulse along a nerve fibre



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10. Explain the following process :

Transmission of a nerve impulse across a chemical synapse.



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11. Draw labelled diagrams of the following

Neurone



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12. Draw labelled diagrams of the following

Brain



Watch Video Solution

13. Draw labelled diagrams of the following

Eye



Watch Video Solution

14. Draw labelled diagrams of the following

Ear



Watch Video Solution

15. Write short notes on the following :

Neural coordination



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16. Write short notes on the following :

Forebrain



Watch Video Solution

17. Write short notes on the following :

Midbrain



Watch Video Solution

18. Write short notes on the following :

Hindbrain



Watch Video Solution

19. Write short notes on the following :

Retina



Watch Video Solution

20. Write short notes on the following :

Ear ossicles



Watch Video Solution

21. Write short notes on the following :

Cochlea



Watch Video Solution

22. Write short notes on the following :

Organ of Corti



Watch Video Solution

23. Write short notes on the following :

Synapse.



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24. Give a brief account of :

Mechanism of synaptic transmission



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25. Give a brief account of :

Mechanism of vision



Watch Video Solution

26. Give a brief account of :

Mechanism of hearing



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27. Answer briefly :

How do you perceive the colour of an object?



Watch Video Solution

28. Answer briefly :

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



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29. Answer briefly :

How does the eye regulate the amount of light that falls on the retina?



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30. Explain the following :

Role of Na^+ in the generation of action potential.



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31. Explain the following :

Mechanism of generation of light-induced impulse in the retina.



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32. Explain the following :

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



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33. Differentiate between :

Myelinated and non-myelinated axons.



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34. Differentiate between :

Dendrites and axons



Watch Video Solution

35. Differentiate between :

Rods and cones



[Watch Video Solution](#)

36. Differentiate between :

Thalamus and Hypothalamus



[Watch Video Solution](#)

37. Differentiate between :

Cerebrum and Cerebellum.



[Watch Video Solution](#)

38. Answer the following :

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



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39. Answer the following :

Which part of the human brain is the most developed ?



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40. Answer the following :

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



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41. 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 chiasma.



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42. Distinguish between :

afferent neurones and efferent neurones.



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43. Distinguish between :

impulse conduction in a myelinated nerve fibre
and unmyelinated nerve fibre



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44. Distinguish between :

aqueous humor and vitreous humor



Watch Video Solution

45. Distinguish between :

cranial nerves and spinal nerves.



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46. Distinguish between :

blind spot and yellow spot.



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