

GPLUS EDUCATION

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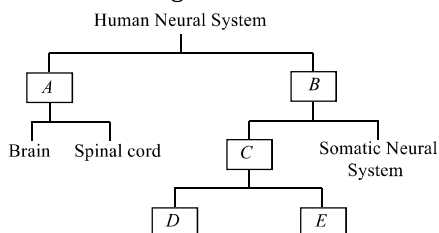
BIOLOGY

NEURAL CONTROL AND COORDINATION

Single Correct Answer Type

- Which one is correct about the physiology of eye?
 - The pressure within the eye (the intraocular pressure) is about 1.5 mm Hg (0.2 kPa)
 - When light is shone in one eye both pupils constrict
 - The pupils dilate when the eye is focused on a near object
 - The aqueous humour is an ultrafiltrate of plasma
- Part of ear where sound is transduced is
 - Tympanic membrane
 - Malleus, incus and stapes
 - Semi-circular canal
 - Cochlea
- You are watching a horror movie and you notice your heart is beating fast and mouth is dry. It is because of
 - Fight and flight response
 - Autonomic nervous system
 - Sympathetic nervous system
 - Both (a) and (c)
- When the stimulus reaches the end of one neuron, it is conducted to the adjacent neuron through the secretions of
 - Acetaldehyde
 - Acetylcholine
 - Acetylcholine esterase
 - Acetyl Co-A
- The reflex pathway comprises
 - One afferent neuron
 - One efferent neuron
 - One afferent and one efferent neuron
 - One afferent and one receptor neuron
- The highly specialized cells called neurons can
 - Detect stimuli
 - Receive stimuli
 - Transmit stimuli
 - All of the above
- If a motor nerve has a conduction velocity of 10 ms^{-1} , how long will it take an action potential to reach a muscle 0.75 m from the spinal cord?
 - 75 m
 - 1.07 m
 - 14 m
 - 1.4 m
- Which of the following statements are correct about the midbrain?
 - Located between the thalamus/hypothalamus
 - Has a canal named cerebral aqueduct passes through
 - Dorsal part consists of 4 lobesChoose the correct option
 - I and II
 - II and III
 - I and III
 - I, II and III
- Presynaptic neuron and a post-synaptic neuron may or may not be separated by a gap called
 - Synaptic knob
 - Neuroreceptor gap
 - Synapse
 - Synaptic cleft
- The band of fibre which joins corpora quadrigemina to cerebellum is called
 - Pons Varolii
 - Valve of Vieussens
 - Corpus callosum
 - Corpus striatum
- What kind of neural organization can be seen in lower vertebrates?
 - Simple neural system
 - Complex neural system
 - Highly developed neural system
 - Very poor neural system
- The movement of the nerve impulse across synaptic cleft is primarily
 - A chemical event
 - A physical event
 - An electrical event
 - A biological event

- c) Cystine
d) γ -amino butyric acid
29. In a man, abducens nerve is injured. Which one of the following function will be affected?
a) Movement of the eye ball
b) Swallowing
c) Movement of the tongue
d) Movement of the neck
30. Which of the following parts of a neuron is covered by fatty sheath?
a) Axon
b) Cyton
c) Dendrite
d) Node of Ranvier
31. The system that transmits impulses from CNS to skeletal muscles is
a) Sympathetic neural system
b) Parasympathetic neural system
c) Somatic neural system
d) Autonomic neural system
32. The pressure on either sides of the ear drum gets equalized by
a) Pinna
b) Eustachian tube
c) Cochlea
d) Labyrinth
33. The diagram given below is the functional organization of the human nervous system. identify *A, B, C, D* and *E* in the figure

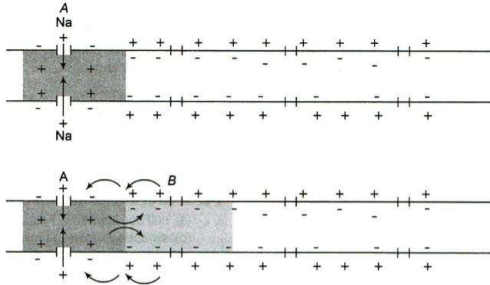


- a) A-PNS, B-CNS, C-ANS, D-Sympathetic nervous system, E-Parasympathetic nervous system
b) A-ANS, B-CNS, C-PNS, D-Sympathetic nervous system, E-Parasympathetic nervous system
c) A-CNS, B-PNS, C-ANS, D-Sympathetic nervous system, E-Parasympathetic nervous system
d) A-ANS, B-PNS, C-ANS, D-Sympathetic nervous system, E-Parasympathetic nervous system
34. In the resting state of the neural membrane, diffusion due to concentration gradients, if allowed would drive
a) K^+ into the cell
b) K^+ and Na^+ out of the cell
c) Na^+ into the cell
d) Na^+ out of the cell
35. Which is a part of spinal cord?
a) Central canal
b) Ventricle
c) Ventral canal
d) Enterocoel
36. Mark the following statements as true/false and choose the correct option from the codes given below
I. Neuroglial cells are the packing and supporting cells found in the brain and spinal cord
II. Oligodendrocytes is a category of glial cells that forms myelin sheaths around the axon
III. Microglia provides mechanical support to the neurons
IV. Astrocytes communicate with one another through potassium channels
- Codes**
- | | | | |
|----------|-----------|------------|-----------|
| I | II | III | IV |
| a) True | True | False | False |
| b) False | True | True | False |
| c) False | False | True | True |
| d) True | False | True | False |
37. For quick coordination, our neural system is organized through
a) Organ to organ connections
b) Cell to cell connections
c) Point to point connections
d) Point to cell connections
38. Saltatory conduction occurs in
a) Myelinated nerves fibres
b) Non-myelinated nerve fibres
c) Liver cells
d) All of the above
39. Action of lysozyme is
a) Physiological
b) Anatomical
c) Morphological
d) None of these
40. The process through which two or more organs interact and complement the functions of one another, is called

- a) Coordination
c) Chemical integration
41. Skeletal muscles are controlled by
a) Sympathetic nerves
c) Somatic nerves
42. Yellow spot of eye is known for
a) Complex blood vascular system
c) Preponderance of cones
43. Middle ear of humans contains ossicles, *i. e.*,
a) Malleus
b) Incus
c) Stapes
d) All of these
44. Mechanism of neural coordination involves
a) Transmission of nerve impulse
c) Physiology of reflex action
45. Which converts short time memory into long time remembrance?
a) Reticular system
b) Hippocampus
c) Thalamus
d) Medulla oblongata
46. 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 negative, then positive and again back to negative
b) First positive, then negative and continue to be negative
c) First negative, then positive and continue to be positive
d) First positive, then negative and again back to positive
47. Read the following statements.
I.Preganglionic nerve fibres of III, VII, IX and X cranial nerves are a part of the parasympathetic nervous system
II.V,VII, IX and X cranial nerves are mixed nerves.
III.Trochlear nerves are the largest cranial nerves.
IV.Abducens nerves are motor nerves and originate from the Gasserian ganglia.
Which of the above statements are correct?
a) I and IV
b) I and II
c) II and III
d) I and III
48. There are two types of photoreceptor cells, *i. e.*, ...A... and ...B.... These cells contains photopigments Here, A and B refers to
a) A-rods; B-cones
c) A-rhodopsin; B-rods
b) A-cones; B-rhodopsin
d) A-rods; B-fovea
49. Which is not a reflex action?
a) Salivation
c) Response to pinching pin in a frog leg
b) Eye opening and closing
d) Sweating
50. A nerve impulse is transmitted from one neuron to another through the junctions called
a) Neuromuscular junction
c) Neurosynaptic junction
b) Neuroreceptor junction
d) Neuroglandular junction
51. The afferent nerve fibres transmit impulses
a) From tissues/organs to the CNS
b) From the CNS to the smooth muscles
c) From the CNS to the concerned peripheral tissues/organs
d) From the CNS to the involuntary organs
52. Which of the damaged cells cannot be repaired?
a) Liver cells
b) Brain cells
c) Bone cells
d) Epidermal cells
53. The system that transmits impulse from the CNS to the involuntary organs and smooth muscles of the body

- a) Sympathetic neural system
- b) Parasympathetic neural system
- c) Somatic neural system
- d) Autonomic neural system

54. Given is the diagrammatic representation of impulse conduction through an axon (at points A and B). View the diagram and arrange the steps of impulse conduction



- I. The polarity of the membrane at site A is reversed and depolarized, *i. e.*, the outer surface becomes negatively charged and the innerside becomes positively charged, generating nerve impulse
 - II. A stimulus causes disturbance to the membrane at site of A nerve fibre resulting in leakage of Na^+ ions inside the nerve fibre
 - III. On the outer surface, current flows from site B to site A to complete the circuit of current flow. Hence, the polarity at the site is reversed, and an action potential is generated at site B. The impulse (action potential) generated at site A arrives at site B. The sequence is repeated along the length of the axon and consequently the impulse is conducted
 - IV. Immediately ahead, the axon (*e. g.*, site B) membrane has a positive charge on the outer surface and a negative charge on its inner surface. As a result, a current flows on the inner surface from site A to site B
- The correct option is

- a) I → II → IV → III
- b) II → I → III → IV
- c) II → I → IV → III
- d) I → IV → III → II

55. Identify the basic functions of neural system

- a) Receiving sensory input from internal and external environment by nerves
- b) Processing the input information
- c) Responding to stimuli
- d) All of the above

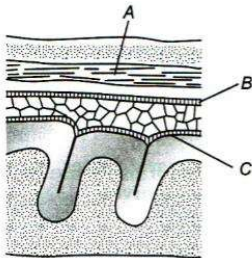
56. How many laminae are present in the grey matter of spinal cord?

- a) Four
- b) Six
- c) Eight
- d) Ten

57. Number of cranial nerves in frog

- a) 10 pairs
- b) 9 pairs
- c) 12 pairs
- d) None of these

58. Given is the diagram of human brain showing meninges. Identify A and C



- a) A-Piamater, B-Arachnoid membrane, C-Duramater
- b) A-Duramater, B-Arachnoid membrane, C-Piamater
- c) A-Arachnoid membrane, B-Piamater, C-Duramater
- d) A-Arachnoid membrane, B-Duramater, C-Piamater

59. Reflex action is controlled by

- a) Sympathetic nervous system
- b) Autonomous nervous system
- c) Spinal cord
- d) Peripheral nervous system

60. Vitreous chamber, which is filled by vitreous humor is the space

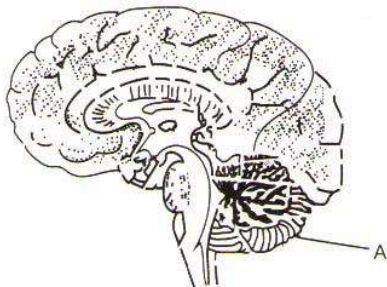
- a) Behind the lens
- b) In front of lens
- c) between choroid and retina
- d) between choroid and sclera

61. Organ of Corti is found in
 a) Heart b) Kidneys c) Inner ear d) Nasal chamber
62. During repolarisation of nerve
 a) K^+ gate close and Na^+ gate opens
 b) Na^+ channels are close and K^+ channels are opens
 c) Both gates remain open
 d) Both K^+ and Na^+ gates are close
63. Choose the incorrect options regarding white matter of the brain
 I. White matter of the brain is white in colour
 II. White matter of the brain is white in colour but sometimes it is found to be grey
 III. White matter of the brain is mostly formed by medullated nerve fibres
 IV. White matter of the brain is formed of cell bodies of nerve fibres
 a) I and III b) II and IV c) I and IV d) II and III
64. Which of the following neuron is also called excitor neuron?
 a) Afferent neuron b) Efferent neuron c) Interneuron d) Both (b) and (c)
65. Brain and spinal cord, combinely form the
 a) CNS b) PNS c) Both (a) and (b) d) Neural system
66. Nerve cells are the part of
 a) Epithelial tissue b) Connective tissue c) Muscles tissue d) Nervous tissue
67. Spinal cord is protected by
 a) Trachea b) Aorta c) Sternum d) Vertebral column
68. A person is wearing spectacles with concave lenses for correcting vision. While not using the glasses, the image of a distant object in his case will be formed?
 a) On the blind spot b) Behind the retina c) In front of retina d) On the yellow spot
69. On the basis of nature of nerve fibres, the nerves are
 a) Medullated and non-medullated nerves b) Myelinated and non-myelinated nerves
 c) Sensory, motor and mixed nerves d) Sensory and motor nerves
70. Which of the following system provides the fastest means of communication within the body?
 a) Endocrine system b) Nervous system c) Circulatory system d) Digestive system
71. The correct sequence of meetings of brain from outside to inside is
 a) duramater → arachnoid → piamater b) arachnoid → duramater → piamater
 c) piamater → duramater → arachnoid d) duramater → piamater → arachnoid
72. Which of the following features show antagonism over a particular organ?

Organs	Sympathetic Nervous System	Parasym pathetic Nervous System
a) Gastric glands	Stimulates secretion of gastric juice	Reduces bile secretion, increases release of sugar
b) Intestinal glands	Decreases secretion of intestinal juice	Promotes secretion of intestinal juice
c) Pancreas	Promotes bile secretion	Increases storage of sugar as glycogen

d)	Salivary glands	Stimulates secretion of saliva	Inhibits secretion of saliva
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73. The cutaneous plexus and the papillary plexus consists
- A network of nerves to provide dermal sensation
 - A network of arteries to provide dermal supply
 - Specialized cells for cutaneous sensations
 - Gland cells that release cutaneous secretions
74. The velocity of action potential propagation
- Is independent of an axon's diameter
 - Depends on the thickness of the myelin around the axon
 - Will be unaffected if the axon becomes demyelinated
 - Is fastest in non-myelinated axons
75. Anterior choroid plexus is present on the
- Floor of diencephalon
 - Cerebral hemispheres
 - Roof of diencephalon
 - Roof of medulla oblongata
76. Retina of eye is analogous to which part of camera?
- Shutter
 - Lens
 - Glass
 - Film
77. In the given diagram, what does 'A' represents?



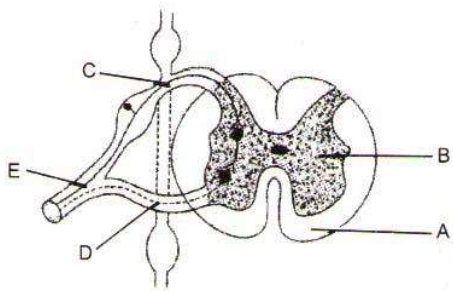
- Pons Varolii
 - Cerebellum
 - Medulla oblongata
 - Midbrain
78. is not involved in knee-jerk reflex
- Muscle spindle
 - Motor neuron
 - Brain
 - Interneurons
79. $\text{Na}^+ - \text{K}^+$ pump is found in membranes of many cells, like nerve cells. It works against electrochemical gradient and involve of ATP used
- 3 ions of Na^+ are pumped out and 2K^+ are taken in
 - 3 ions of Na^+ are taken in and 2K^+ are pumped out
 - 2 ions of Na^+ are thrown out and 3K^+ are absorbed
 - 3 ions of K^+ are absorbed, 3Na^+ are pumped out
80. Synaptic knob is bulb-like structure which is present
- At the end of axon terminal
 - At the node of Ranvier
 - In the cell body
 - At the end of dendrites
81. Autonomic nervous system affects
- Reflex actions
 - Sensory organs
 - Internal organs
 - None of these
82. The function of Na^+ and K^+ pump is to move
- Na^+ in and K^+ out
 - Na^+ out and K^+ in
 - Na^+ out and Cl^- in
 - Cl^- out and Na^+ in
83. The PNS comprises of
- Brain
 - Spinal cord
 - Both (a) and (b)
 - All the nerves of the body associated with the CNS
84. Read the following statements carefully and select the correct option
- I. The medulla is connected to the spinal cord

- II. Medulla contains controlling centres for respiration, cardiovascular reflexes and gastric secretion
 III. Cerebellum has very convoluted surface in order to provide the additional space for more neurons
- a) Only I b) I and II c) Only III d) I, II and III
85. The respiratory rhythm centre is present in the
 a) Cerebrum b) Cerebellum
 c) Hypothalamus d) Medulla oblongata
86. Which of the following is the correct function of endocrine system with reference to chemical coordination?
 a) Provides neural integration through hormones
 b) Provides chemical integration through hormones
 c) Provides an organized network of point to point connections for a quick coordination
 d) None of the above
87. Consider the statements as True/False
 I. The axoplasm inside the axon contains high concentration of K^+ and negatively charged proteins
 II. The axoplasm inside the axon contains low concentration of Na^+
 III. The fluid outside the axon contains a low concentration of K^+
 IV. The fluid outside the axon contains a high concentration of Na^+ and negatively charged proteins
 The correct option is
 a) I-True, II-False, III-False, IV-True b) I-True, II- True, III-False, IV- False
 c) I-True, II- True, III- True, IV- False d) I- False, II- True, III-False, IV- False
88. Maintenance of the ionic gradients across the resting membrane is done by the
 a) Active transport of ions b) Passive transport of ions
 c) Active transport of proteins d) Passive transport of proteins
89. How many pairs of cranial nerves are found in humans?
 a) 10 pairs b) 11 pairs c) 12 pairs d) 13 pairs
90. Which part of the brain is involved in loss of control when a person drinks alcohol?
 a) Cerebellum b) Cerebrum c) Medulla oblongata d) Pons Varolii
91. Ependymal cells
 a) Ciliated cells b) Type of epithelial cells
 c) Lines the cavities of the central nervous system d) All of the above
92. In the blind spot, where the optic nerves leave the eyes
 a) Rods and cones are absent b) Only cones are present
 c) Only rods are present d) Special neurons are present
93. Association areas of the brain are
 a) Always sensory areas b) Always motor areas
 c) Neither sensory nor motor areas d) None of the above
94. Study of structure, functions and disease of the nervous system is called
 a) Nervology b) Endocrinology c) Neurology d) Endoneurology
95. Which of the following statements are correct for RAS?
 I. It screens sensory information
 II. It is important in overall activation and arousal
 III. It is concerned with involuntary movements
 IV. It is the seat of learning, memory, reasoning and creative ability
 a) I and II b) II and III c) II and IV d) I and IV
96. Which is not a part of hindbrain?
 a) Thalamus b) Cerebellum c) Pons Varolii d) Medulla
97. Which of the following statements are correct for iris?
 I. The ciliary body extends forward to form iris
 II. It is pigmented and opaque structure

- III. It is the visible coloured portion of the eye
Choose the correct option
- a) I and II b) I and III c) II and III d) I, II and III
98. Brain depends on blood for the supply of
- a) Oxygen and glucose b) Oxygen and electrolytes
c) Oxygen and ATP d) ATP and glucose
99. In the axon of motor nerve fibre, the nerve impulse travels
- a) Towards cell body b) Away from cell body
c) Away from synapse d) In both directions
100. Rods and cones are present in
- a) Iris b) Cornea c) Sclerotic d) Retina
101. Synaptic vesicle is found in
- a) Pre-synaptic neuron b) Post-synaptic neuron
c) Synaptic cleft d) None of these
102. Which one of the following is an example of negative feedback loop in humans?
- a) Constriction of skin blood vessels and contraction of skeletal muscles when it is too cold
b) Secretion of tears after falling of sand particles into the eyes
c) Salivation of mouth at the sight of delicious food
d) Secretion of sweat glands and constriction of skin blood vessels when it is too hot
103. The brain can be divided into
- a) Telencephalon, Rhombencephalon, Diencephalon
b) Mesencephalon, Telencephalon, Diencephalon
c) Prosencephalon, Mesencephalon, Rhombencephalon
d) Diencephalon, Prosencephalon, Rhombencephalon
104. Under prolonged starvation, brain receives energy from
- a) Carbohydrates b) Fats c) Proteins d) Acetoacetate
105. Coiled portion of the labyrinth is called
- a) Cochlea b) Ear drum c) Pinna d) Ear canal
106. Pneumotaxic centre is present in
- a) Cerebrum b) Cerebellum c) Medulla oblongata d) Pons Varolii
107. Sympathetic nervous system induces
- a) Heart beat b) Secretion of semen
c) Secretion of saliva d) Secretion of digestive juices
108. Which of the following is correct in case of chemical synapses?
- I. The membranes of the pre and postsynaptic neurons are separated by a gap called synaptic cleft
II. Chemicals called neurotransmitters are involved in the transmission of impulses
III. Impulse transmission in chemical synapse is faster than that across an electrical synapse
IV. Chemical synapses are rare in our system
- a) I, II and IV b) II and III c) I and II d) I, II, III and IV
109. What used to be described as Nissl's granules in a nerve cell are now identified as?
- a) Ribosomes b) Mitochondria c) Cell metabolites d) Fat granules
110. Which of the following is known as the site of information processing and control?
- a) CNS b) PNS c) Both (a) and (b) d) Neurons
111. Injury to vagus nerve in human is not likely to affect
- a) Tongue movements b) Gastrointestinal movements
c) Pancreatic secretion d) Cardiac movements
112. The human neural system comprises
- a) PNS only b) CNS only c) Both (a) and (b) d) None of these

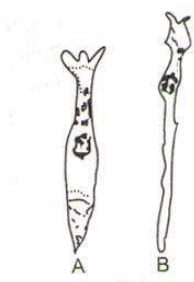
113. Association areas are regions found in
a) Cerebrum b) Cerebral cortex c) Cerebellum d) Diencephalon
114. A neuron is a structure
a) Microscopic b) Symmetrical c) Non-microscopic d) Glant
115. Photoreceptor cells of human eye are
a) Rods b) Cones c) Both (a) and (b) d) Ganglion cells
116. Parkinsonism is related with
a) Brain b) Spinal cord c) Cranial nerves d) Spinal nerves
117. Protein found in eye lens is
a) Crystalline b) Collagen c) Opsin d) Rhodopsin
118. One of the examples of the action of the autonomous nervous system is
a) Knee-jerk response b) Papillary reflex
c) Swallowing of food d) Peristalsis of the intestines
119. The nervous tissue forms the nervous system in animals. Which of the following is correct about its origin?
a) Merodermal b) Ectodermal c) Endodermal d) None of these
120. Which part of the human brain is largest?
a) Cerebellum b) Thalamus c) Cerebrum d) Medulla oblongata
121. A transparent crystalline structure which is held in place by ligaments attached to the ciliary body, is called the
a) Ciliary body b) Lens c) Iris d) Pupil
122. The most appropriate definition for neuroglial cells are that they are
a) Non-sensory supporting cells b) Secretory cells
c) Sensory cells d) Sensory and supporting cells
123. Brain controls the
a) Voluntary movements b) Balance of the body
c) Functioning of vital involuntary organs d) All of the above
124. Myelin sheath is derived from
a) Neuroglial cells b) Schwann cells c) Nerve cells d) All of these
125. The forebrain consists of
a) Cerebrum b) Thalamus c) Hypothalamus d) All of these
126. In humans, pneumotaxic centre is present in
a) Thalamus b) Pons region of brain c) Right hemisphere d) Left hemisphere
127. Hypothalamus controls
I. urge for eating and drinking
II. thermoregulation
III. hormones production that regulates the secretion of pituitary gland
IV. creative thinking and consciousness
a) I and III are correct b) II and III are correct c) I and II are correct d) I, II and III are correct
128. Which centre is stimulated during increase in body temperature?
a) Anterior hypothalamus b) Posterior hypothalamus
c) Limbic system d) Red nucleus
129. Give movements are controlled by
I. Gastrointestinal movement
II. Pancreatic movement
III. Tongue movement
Select the correct option
a) I and II are controlled by vagus nerve b) I and III are controlled by vagus nerve
c) Only I is controlled by vagus nerve d) Only II is controlled by vagus nerve
130. Which one is correct regarding the ear and hearing?

- a) The range of human hearing is from 20 Hz to 20 kHz
 b) Conductive hearing loss would be evident if a person had a similar degree of hearing loss for air conduction and bone conduction
 c) The ear is most sensitive to frequencies between about 100 Hz and 300 Hz
 d) The endolymph of the scala media is similar in composition to plasma
131. Given below the hormones present in human body
 I. Cortisone
 II. Acetylcholine
 III. Epinephrine
 Choose the correct option regarding these hormones
 a) I and II are neurotransmitter
 b) I and III are neurotransmitter
 c) II and III are neurotransmitter
 d) All are neurotransmitter
132. In dark adaptation,
 a) Only cones are involved
 b) Only rods are involved
 c) Both (a) and (b)
 d) Neither rods nor cones are involved
133. Dreaming occurs in
 a) α -sleep
 b) REM sleep
 c) Deep sleep
 d) Slow wave sleep
134. Node of Ranvier is found in
 a) Muscle bundles
 b) Dendrite
 c) Right auricle
 d) Axon
135. Aqueous and vitreous humour are divided by
 a) Lens
 b) Iris
 c) Retina
 d) Optic nerve
136. Cerebellum is concerned with the
 a) Contraction of voluntary muscles
 b) Coordinating and regulation muscles tone
 c) Maintaining posture orientation and equilibrium of body
 d) All of the above
137. Unidirectional transmission of a nerve impulse through nerve fibre is due to the fact that
 a) Nerve fibre is insulated by a medullary sheath
 b) Sodium pump starts operating only at the cyton and then continues into the nerve fibre
 c) Neurotransmitters are released by dendrites and not by axon endings
 d) Neurotransmitters are released by the axon endings and not by dendrites
138. The TV cranial nerve is
 a) Oculomotor
 b) Trochlear
 c) Olfactory
 d) Facial
139. In a cross-section of the spinal cord A, B, C, D and E represents



- a) A-White matter, B-Grey matter, C-Dorsal matter, D-Ventral root, E-Spinal nerve
 b) A-White matter, B-Grey matter, C-Ventral root, D-Dorsal root, E-Spinal nerve
 c) A-Grey matter, B-White matter, C-Ventral matter, D-Dorsal root, E-Spinal matter
 d) A-Grey matter, B-White matter, C-Dorsal root, D-Ventral root, E-Spinal nerve
140. By which nervous system and of what type, the blood is supplied into visceral organs?

- a) Sympathetic nervous system, voluntary
 b) Sympathetic nervous system, involuntary
 c) Parasympathetic nervous system, involuntary
 d) Both SNS and PNS, involuntary
141. Light falls on retina and its amount is regulated by
 a) Iris b) Ciliary muscles c) Cornea d) Lens
142. Blind spot is called to because of
 a) The presence of photoreceptor cells b) Presence of optic nerves
 c) The absence of photoreceptor cells d) None of the above
143. If dorsal nerve of spinal cord is broken down then
 a) No impulse is transmitted b) Impulse is transmitted but slowly
 c) Impulse is transmitted fast d) No effect on impulse
144. Arrange the given structures in the correct sequence of pathway of light from outside to inside the eyeball of human eye
 I. Lens
 II. Aqueous humour
 III. Vitreous humour
 IV. Cornea
 Choose the correct sequence
 a) IV, II, I, III b) I, II, III, IV c) IV, III, II, I d) I, IV, II, III
145. Which of the following is not correct for rods?
 I. Twilight vision is the function of the rods
 II. It is responsible for daylight vision sometimes
 III. The rods contain a protein called rhodopsin
 IV. Rods are photoreceptor cells
 Choose the correct option
 a) Only I b) Only II c) I and III d) II and III
146. Three major components of human eyeball are
 a) Lens, aqueous humor and vitreous humor b) Lens, iris and optic nerve
 c) Cornea, lens and optic nerve d) Cornea, lens and iris
147. Examine the diagram of the two cell types A and B given below and select the correct option.



- a) Cell-A is the rod cell found evenly all over retina
 b) Cell-A is the cone cell more concentrated in the fovea centralis
 c) Cell-B is concerned with colour vision in bright light
 d) Cell-A is sensitive to low light intensities
148. Which of the following is not correctly matched?
 a) Rhinencephalon-Olfactory b) Hypothalamus-Pituitary
 c) Cerebellum-Balance d) Medulla oblongata-Temperature regulation
149. When we do physical exercises, the energy demand is increased for
 a) Increasing the chemical coordination b) Providing the chemical integration
 c) Integrating all the activities of the organs d) Maintaining an increased muscular activity

150. Choose the correct statements about Nissl's granules from the codes given below
 I. There are regular masses of ribosomes
 II. There are irregular masses of ribosomes and ER
 III. There are granular bodies
 IV. They synthesise proteins in the cell
codes
 a) Only I b) I and III c) I and IV d) II, III and IV
151. Olfactory lobes of man are
 a) Fused and hollow b) Fused and solid c) Free and hollow d) Solid
152. Ampulla of Lorenzini are thermoreceptors which are found in
 a) Fishes b) Man c) Reptiles d) Bats
153. Vertebrate brain differentiates from
 a) Endoderm b) Mesoderm c) Ectoderm d) Blastoderm
154. The choroid layer of human eye is
 a) Thin over the posterior 2/3 of eyeball
 b) Thick over the posterior 4/3 of eyeball
 c) Coloured over the anterior 2/3 of eyeball
 d) Opaque structure over the anterior 4/3 of eyeball
155. Which of the following is correct for pupil of human eye?
 I. It is the aperture surrounded by the iris
 II. The diameter of pupil is regulated by muscle fibres of iris
 III. It is a transparent crystalline structure attached to the ciliary body
 The correct option is
 a) Only I b) Only III c) I and II d) I, II and III
156. Which cranial nerve gives out a number of branches?
 a) Optic b) Facial c) Vagus d) Trigeminal
157. The ...A... receives signal from a sensory organ and transmits the impulse *via* a dorsal nerve root into the CNS (at the level of spinal cord) while the ...B... carries signals from ...C... to the ...D...
 Choose the correct option for A, B, C and D to complete the given statement
 a) A-efferent neuron, B-afferent neuron, C-CNS, D-effector
 b) A-afferent neuron, B-efferent neuron, C-effector, D-CNS
 c) A-afferent neuron, B-efferent neuron, C-CNS, D-effector
 d) A-efferent neuron, B-afferent neuron, C-effector, D-CNS
158. Which one of the following cranial nerves is carrying the nerve fibres originating from the Edinger-Westphal nucleus?
 a) Oculomotor b) Trochlear c) Abducens d) Vagus
159. When we do physical exercises, the energy demand is
 a) Increased b) Decreased c) Not effected d) Both (a) and (b)
160. Which part of human brain is concerned with the regulation of body temperature?
 a) Medulla oblongata b) Cerebellum c) Cerebrum d) Hypothalamus
161. Identify the correct sequence of organs/regions in the organisation of human ear as an auditory mechanoreceptor organ.
 a) Pinna—Cochlea—Tympanic membrane canal—Malleus—Stapes—Incus—Auditory nerve
 b) Pinna—Tympanic membrane— Auditory canal—Incus —Malleus— Stapes—Cochlea—Auditory nerve
 c) Pinna—Malleus—Incus—stapes—Auditory canal—Tympanic membrane—Cochlea—Auditory nerve
 d) Pinna—Tympanic membrane—Auditory canal—Cochlea—Malleus—Incus—Stapes-Auditory

nerve

162. Thalamus is a structure wrapped by cerebrum, is
- a) A major centre for motor signaling
 - b) A major coordinating centre for sensory and motor signaling
 - c) A major coordinating centre for sensory signal only
 - d) Not a nervous part of a brain

163. When different cones of human eye are stimulated equally, a sensation of light is produced
- a) Red
 - b) White
 - c) Green
 - d) Blue

164. Ultra violet radiation from sun causes which of the following disorder of eyes?
- a) Cataract
 - b) Glaucoma
 - c) Dilation of pupil
 - d) Some defect of retina

165. Which of the following statements are correct about the cortex of cerebrum? Choose the correct codes given below
- I. It consists of grey matter
 - II. It shows prominent folds
 - III. It consists of white matter
 - IV. It contains motor areas, sensory areas and association areas
- Codes

- a) Only I
- b) I and II
- c) I, II and IV
- d) I, III and IV

166. The vestibular apparatus of human ear is composed of
- a) Oval window
 - b) Otolith organs
 - c) Three semicircular canals
 - d) Both (b) and (c)

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

Feature	Rod cell	Cone cell
a) Visual acuity	High	Low

b) Visual pigment contained	Iodopsin	Rhodopsin
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c) Overall function	Vision in poor light	Colour vision and detailed vision in bright light
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d) Distribution	More concentrated in centre of retina	Evenly distributed all over retina
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168. Human tears contains an enzyme
- a) Lysozyme
 - b) Rennin
 - c) Protease
 - d) Peptidase

169. Which of the following statements are correct for a nerve cell?

- I. Each neuron has a cell body
- II. Each neuron has a single axon
- III. Each neuron has a variable number of dendrites
- IV. Neurons are the functional units of nervous system

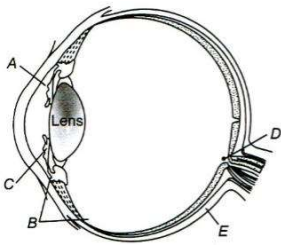
Select the correct option

- a) I and IV
- b) I, II and III
- c) All are incorrect
- d) All are correct

170. Structurally what are olfactory nerve cells?

- a) Multipolar neurons
- b) Unipolar neurons
- c) Neurochemically specialized neurons
- d) Bipolar neurons

171. Given is the diagram of human eye. Identify A and E



- a) Aqueous chamber → Ciliary body → Iris → Blindspot → Sclera
- b) Aqueous chamber → Ciliary body → Sclera → Blindspot → Iris
- c) Aqueous chamber → Ciliary body → Blindspot → Iris → Sclera
- d) Ciliary body → Aqueous chamber → Blindspot → Iris → Sclera

172. Which of the following is cochlear duct?

- a) Scala vestibule
- b) Scala tympani
- c) Scala media
- d) None of these

173. Pneumotaxic centre is present in the

- a) Pons varoli
- b) Cerebellum
- c) Corpora quadrigemina
- d) Corpus stratum

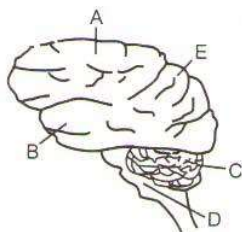
174. Which of the following is the part of midbrain of rabbit?

- a) Diencephalon
- b) Cerebrum
- c) Corpora quadrigemina
- d) None of these

175. Arbor vitae is composed of

- a) Grey matter
- b) Neuroglial cells
- c) White matter
- d) All of these

176. In the diagram of the lateral view of the human brain, parts are indicated by alphabets. Choose the answer in which these alphabets have been correctly matched with the part which they indicate.



- a) A- Temporal lobe B-Parietal lobe
C- Cerebellum D-Medulla oblongata
E-Frontal lobe
- b) A- Frontal lobe B-Temporal lobe
C- Cerebrum D-Medulla oblongata
E-Occipital lobe
- c) A- Temporal lobe B-Parietal lobe
C- Cerebrum D-Medulla oblongata
E-Frontal lobe
- d) A- Frontal lobe B-Temporal lobe
C- Cerebellum D-Medulla oblongata
E-Parietal lobe

177. Medulla oblongata is originated from

- a) Ectoderm
- b) Mesoderm
- c) Endoderm
- d) Ectomesoderm

178. The forebrain develops into

- a) Diencephalon and pons
- b) Diencephalon and medulla
- c) Diencephalon and cerebrum
- d) Diencephalon and cerebellum

179. Which of the following statement is correct for Iter?

- a) It form a branching tree like core of white matter, called arbor vital
 b) It is a very narrow cavity, the cerebral aqueduct, extends through the forebrain
 c) It is a very narrow cavity, the cerebral aqueduct, extends through the midbrain
 d) It connects the pons varolii and cerebellum
180. 'Adaptation' of eyes in dark is due to
 a) Depletion of vision pigment in rod
 b) Depletion of vision pigment in cones
 c) Repletion of vision pigment in rods
 d) Repletion of vision pigment in cones
181. Which of the following statements is correct regarding receptors in the skin?
 a) All skin receptors are encapsulated
 b) The receptive fields of touch receptors are uniform in area
 c) The nociceptors of the skin are bare nerve endings
 d) All sensory information from the skin reaches the brain *via* the dorsal column pathway
182. Nerve impulse travels faster in
 a) Medullated nerve fibre
 b) Non- medullated nerve fibre
 c) Both (a) and (b)
 d) None of the above
183. If an organism has more rods, it will
 a) Active during day
 b) Possess colour vision
 c) Active during night
 d) Both (a) and (a) are possible
184. The cell body of neuron contains of
 a) Cytoplasm
 b) Cell organelles
 c) Granular bodies
 d) All of these
185. Connection between axon and dendrite is
 a) Synapse
 b) Synapsis
 c) Desmosome
 d) Tight junction
186. On postsynaptic membrane, the new potential developed is
 a) Always inhibitory
 b) Always excitatory
 c) May be excitatory or inhibitory
 d) Neither excitatory nor inhibitory
187. The cranial nerve that goes to the external rectus muscle is
 a) II
 b) III
 c) VII
 d) VI
188. Number of spinal nerves in rabbit is
 a) 27 pairs
 b) 31 pairs
 c) 37 pairs
 d) 47 pairs
189. The supporting and nutritive cells found in the brain are
 a) Ependymal cells
 b) Microglia
 c) Astrocytes
 d) Oligodendrocytes
190. Which of the following substances leads to the inhibition of central nervous system?
 a) Glycine
 b) GABA
 c) Norepinephrine
 d) Both (a) and (b)
191. Which part of human ear is concerned with hearing?
 a) Reissner's membrane and basilar membrane
 b) Reissner's membrane and tectorial membrane
 c) Ampulla
 d) Basilar membrane and tectorial membrane
192. Fovea in the eye is a central pit in the yellowish pigmented spot called
 a) Blind spot
 b) Retina
 c) Cornea
 d) Macula lutea
193. Which foramen is paired in mammalian brain?
 a) Foramen of Luschka
 b) Foramen of Magendie
 c) Foramen of Monro
 d) Inter-ventricular foramen
194. Dendrites transmit impulses towards the
 a) Cell body
 b) Axon
 c) Both (a) and (b)
 d) None of these
195. Centre for thinking and learning is present in which part of brain?
 a) Cerebrum
 b) Cerebellum
 c) Dienceohalon
 d) Medulla oblongata

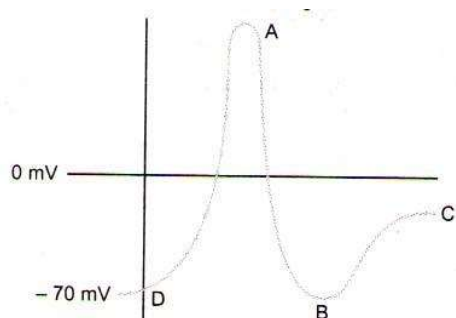
196. The reflex arc, which is made of two neurons is known as
- Monosynaptic reflex arc
 - Disynaptic reflex arc
 - Polysynaptic reflex arc
 - Asynaptic reflex arc
197. Bipolar neurons are found in the
- Embryonic stage
 - Cerebral cortex
 - Cerebellum
 - Retina of eye
198. During the conduction of a nerve impulse, the action potential results from the movement of
- K^+ ions from extracellular fluid to intracellular fluid
 - Na^+ ions from intracellular fluid to extracellular fluid
 - K^+ ions from intracellular fluid to extracellular fluid
 - Na^+ ions from extracellular fluid to intracellular fluid
199. Bipolar neurons occur in
- Vertebrate embryos
 - Retina of eye
 - Brain and spinal cord
 - Skeletal muscles
200. Which one of the following statements is correct?
- Neurons regulate endocrine activity, but not *vice versa*
 - Endocrine glands regulate neural activity and nervous system regulates endocrine glands
 - Neither hormones control neural activity nor the neurons control endocrine activity
 - Endocrine glands regulate neural activity but not *vice versa*
201. 9th pair of cranial nerve in frog is
- Hypoglossal
 - Glossopharyngeal
 - Vagus
 - Trigeminal
202. Cerebellum of brain is responsible for
- The maintenance of equilibrium and posture
 - Olfactory functions
 - Controlling optic functions
 - All of the above
203. The point in eye of mammals from which optic nerves and blood vessels leave the eye ball is
- Yellow spot
 - Blind spot
 - Pars optica
 - None of these
204. Cornea transplant in humans is almost never rejected. This is because
- Its cells are least penetrable by bacteria
 - It has no blood supply
 - It is composed of enucleated cells
 - It is a non-living layer
205. In the following abnormalities of the eye, which one is serious condition that leads to blindness?
- Presbyopia
 - Myopia
 - Hypermetropia
 - Glaucoma
206. Synaptic knob possesses
- Granular vesicles
 - Nissl's vesicles
 - Synaptic vesicles
 - None of these
207. Which of the following part is involved in interpreting an input, storing input information and initiating a response in the light of similar past experiences?
- Motor area
 - Sensory area
 - Association area
 - Pons Varolii
208. Which of the following is not related to the autonomic nervous system?
- Peristalsis
 - Digestion
 - Excretion
 - Memory and learning
209. The wall of the eyeball is composed of layers
- One
 - Two
 - Three
 - Four
210. The total amount of cerebrospinal fluid in humans is
- 1 L
 - 2 L
 - 80-150 mL
 - 400-500 mL
211. Give the correct term for each of the following and choose the correct option from the codes given below
- A. Axon or dendron, covered with one or two sheaths
B. Bundles of nerve fibres within the centralnervous system

- C. Masses of neurons that lie in the peripheral nervous system
- D. Masses of neurons clustered inside the central nervous system

Codes

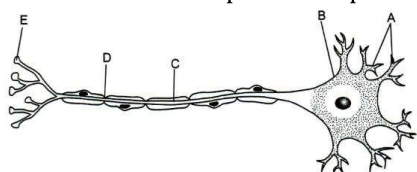
- a) A-Nerve fibre, B-Tracts, C-Ganglia, D-Nuclei
- b) A-Tracts, B-Nerve fibre, C-Ganglia, D-Nuclei
- c) A-Ganglia, B-Nuclei, C-Tracts, D-Nerve fibre
- d) A-Ganglia, B-Tracts, C-Nerve fibre, D-Nuclei

212. The amount of CSF in the cranial cavity is
 a) 500 mL b) 140 mL c) 1 L d) 1.5 mL
213. Inside the skull, the brain is covered by
 a) Arachnoid b) Cranial meninges c) Piamater d) Duramater
214. The rods contains a purplish-red protein called
 a) Opsin b) Rhodopsin c) Photopsin d) Iodopsin
215. Which of the following prevents internal reflection of light within the eye?
 a) Cornea b) Choroid c) Sclera d) Conjunctiva
216. Parkinson's disease (characterized by tremors and progressive rigidity of limbs) is caused by degeneration of brain neurons that are involved in movement and control. Identify the neurotransmitter responsible for this.
 a) Acetylcholine b) Norepinephrine c) Dopamine d) GABA
217. Aqueous chamber which is filled by aqueous humour is the space
 a) Behind the lens b) Between sclera and retina
 c) Between cornea and lens d) Between choroid and sclera
218. Human ear can be divided into
 a) Outer ear b) Middle ear c) Inner ear d) All of these
219. Which is an example of conditioned reflex?
 a) Your keeping took up a stone then dog run away
 b) Eye closed when anything enter into it
 c) Hand took up when piercing with needle
 d) Digestive food goes forward in alimentary canal
220. Glucose and oxygen are required by brain for constant supply of energy to control the functions of our body organs.
 What will be the consequences if brain is deprived of oxygen and glucose?
 I. Brain deprived of oxygen for just 5 minutes will get permanently damaged
 II. Glucose is important in the nerve impulse conduction
 III. One side of brain is unable to know, what the other side is doing, when it is deprived of oxygen
 IV. Mental confusion will results if brain is deprived of glucose
 a) I and II b) III and IV c) I and IV d) II and IV
221. The potential difference across the membrane of nerve fibre when it does not shown any physiological activity is called resting potential. It is about
 a) -60 mV b) -80 mV c) +60 mV d) +90 mV
222. Which is the visible coloured portion of the eye?
 a) Pupil b) Lens c) Iris d) Ciliary body
223. Refer the figure to answer the question.



Identify the region where all Na^+ channels are reactivated but closed and all K^+ channels are closed.

- a) D b) C c) B d) A
224. The anterior portion of sclera is called
 a) Iris b) Cornea c) Ciliary body d) Pupil
225. Arachnoid membrane is
 a) Outer meninx b) Neurilemma c) Middle meninx d) Inner meninx
226. Cells of Schwann are associated with
 a) Nervous tissue b) Skeletal muscle c) Cardiac muscle d) Connective tissue
227. Reflex action involves
 a) Spinal cord b) Cerebellum c) Medulla oblongata d) Optic fibre
228. In humans, tympanic membrane is composed of connective tissues which is covered with
 a) Skin outside and with mucus membrane inside b) Mucus membrane only
 c) Mucus membrane outside and with skin inside d) Skin only
229. At blind spot
 a) Optic nerves leave the eye and retinal blood vessels enter it
 b) Retinal blood vessels leave the eye and optic nerves enter it
 c) There is no involvement of optic nerves at all
 d) There is no involvement of retinal blood vessels at all
230. Wax gland present in the human ear canal is called
 a) Sebaceous gland b) Mucous gland c) Ceruminous gland d) Sweat gland
231. Yellow spot is found in
 a) Muscles b) Nerves c) Kidney d) Eyes
232. Function of ear ossicles in human is
 a) To equalise the pressure on either sides of ear drum
 b) Collects the vibrations in the air which produce sound
 c) To increase the efficiency of transmission of sound waves to the inner ear
 d) All of the above
233. Select the correct option to represent A to E in the given structure of a neuron



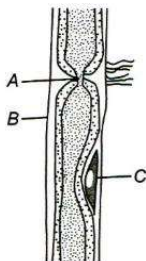
- a) A-Dendrites, B-Cell body, C-Axon, D-Node of Ranvier, E-Synaptic knob
 b) A- Axon, B-Myelin sheath, C-Schwann cell, D-Node of Ranvier, E-Axon terminal
 c) A-Dendrites, B-Cell body, C-Schwann cell, D-Node of Ranvier, E-Synaptic knob
 d) A-Axon, B-Cell body, C-Dendrites, D-Node of Ranvier, E-Axon terminal
234. Sclera of human eye is composed of
 a) Blood vessels b) Ganglion cells c) Photoreceptor cells d) Connective tissue

235. The nerve centres which control the body temperature and the urge for eating are controlled by
 a) Hypothalamus b) Pons c) Cerebellum d) Thalamus
236. Involuntary activities of the body are controlled by
 a) Autonomic nervous system b) Somatic nervous system
 c) Both (a) and (b) d) None of the above
237. The cavity in the region of diencephalon in the brain of rabbit is called
 a) Iter b) Third ventricle c) Lateral ventricle d) Foramen of Monro
238. Which one is correct about the focusing of the eye?
 a) Hypermetropia (hyperopia) may be corrected by a diverging lens
 b) The focus of the eye is controlled exclusively by the parasympathetic innervation of the ciliary body
 c) The lens is the chief refractive element of the eye
 d) When the eye focuses on a distant object, the ciliary muscle contracts
239. The part of the brain where the centre for hunger and thirst is located is
 a) Cerebrum b) Hypothalamus c) Cerebellum d) Medulla oblongata
240. Given below are different components of reflex are
 I. Effector organ
 II. Interneuron
 III. Motor neuron
 IV. Sensory neuron
 V. Sensory receptor

Arrange these in correct order of action potential that follows a sensory receptor stimulation

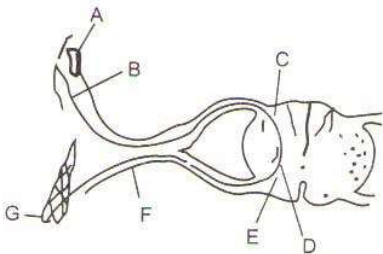
- a) V, IV, III, II, I b) V, IV, II, III, I c) V, III, IV, I, II d) V, II, IV, III, I

241. Given below the diagram of an axon. Label A to C correctly



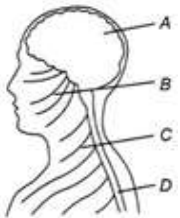
- a) A-Endoneurium, B-Neurolemma, C-Nucleus
 b) A-Neurolemma, B-Endoneurium, C-Schwann cell
 c) A-Node of Ranvier, B-Neurolemma, C-Schwann cell
 d) A-Neurolemma, B-Node of Ranvier, C-Schwann cell
242. Internal ear is filled with
 a) Perilymph b) Endolymph c) Lymph d) Both (a) and (b)
243. At the posterior pole of the eye lateral to the blind spot, there is a yellowish pigmented spot called
 a) Corpus luteum b) Fovea c) Macula quadrigemina d) Macula lutea
244. The electrical potential difference 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
245. Which of the following statement is incorrect?
 a) CNS is the site of information processing and control
 b) CNS includes brain and spinal cord
 c) PNS comprises of all the nerves of the body associated with CNS
 d) The nerve fibre of DNS are of two types, *i.e.*, afferent and efferent fibres
246. Taste area lies in the

- a) Frontal lobe b) Occipital lobe c) Parietal lobe d) Temporal lobe
247. Functions of association areas in cerebral cortex includes
 a) Intersensory associations b) Memory
 c) Communication d) All of the above
248. In which of the following, Nissl's granules are found in?
 a) Liver cells b) Nerve cells
 c) Intestinal cells d) Uriniferous tubules
249. The purplish red pigment rhodopsin contained in the rods type of photoreceptor cells of the human eyes is a derivative of
 a) Vitamin-C b) Vitamin-D c) Vitamin-A d) Vitamin-B
250. The functions of the organs/organ system in our body must be coordinated to maintain
 Complete the given statement with reference to NCERT textbook
 a) Muscular activity b) Homeostasis c) Respiration d) Neural coordination
251. Cerebral hemispheres of rat are connected by
 a) Corpus luteum b) Corpus callosum
 c) Corpus albicans d) Corpus spongiosum
252. Multipolar neurons are found in the
 a) Retina of eye b) Cerebral cortex c) Embryonic stage d) None of these
253. The system, responsible for providing an organized network of point to point connections for a quick coordination, is called
 a) Endocrine system b) Circulatory system c) Digestive system d) Neural system
254. The nerve fibres are enveloped with Schwann cells, which form a myelin sheath around the axon
 a) Myelinated b) Non-myelinated c) Afferent d) Efferent
255. The black pigment layer in human eye, that reduces internal reflection is located in
 a) Iris b) Retina c) Cornea d) Sclerotic
256. Which of the following is not an organ of central nervous system?
 a) Brain b) Cranial nerves c) Spinal cord d) None of these
257. Dilatation of pupil takes place by
 a) Sympathetic nervous system b) Parasympathetic nervous system
 c) Central nervous system d) Both (a) and (b)
258. In a myelinated neuron, two adjacent myelin sheaths are separated by gaps called
 a) Nodes of Ranvier b) Synaptic cleft c) Schwann cells d) Synaptic knob
259. Which brain structure in rabbit is directly related to vision?
 a) Corpus albicans b) Hippocampal lobe
 c) Corpus callosum d) Corpora quadrigemina
260. The following diagram indicates the reflex arc. Identify the parts labeled as A, B, C, D, E, F and G and choose the correct option.

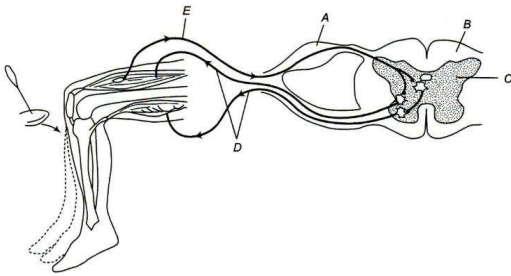


- a) A-Sense organ, B-Sensory nerve, C-Dorsal horn, D-Interneuron, E-Ventral horn, F-Motor nerve, G-Effector b) A-Sense organ, B-Sensory nerve, C-Ventral horn, D-Interneuron, E-Dorsal horn, F-Motor nerve, G-Effector

- c) A-Sense organ, B-Motor nerve, C-Dorsal horn, d) A-Effector, B-Motor nerve, C-Ventral horn, D-D-Interneuron, E-Ventral nerve, F-Sensory Interneuron, E-Dorsal horn, F-Sensory nerve, G-Sense organ
261. The gaps between two adjacent myelin sheaths is called
 a) Synapse b) Synaptic gap c) Nodes of Ranvier d) Sheath gap
262. Sympathetic nerve accelerates heart beat due to
 a) Adrenaline b) Nor-adrenaline c) Insulin d) Glucagon
263. Which of the following does not act as a neurotransmitter?
 a) Acetylcholine b) Glutamic acid c) Epinephrine d) tyrosine
264. Odd nerve is
 a) Optic b) Oculomotor c) Olfactory d) Auditory
265. Axons can be
 a) Non-myelinated b) Myelinated c) Either (a) or (b) d) None of these
266. Schwann cells, form a myelin sheath around the
 a) Dendrite b) Cell body c) Nucleus d) Axon
267. Which of the following nerves is purely motor nerve?
 a) Vagus b) Facial c) Abducens d) Trigeminal
268. Choroid plexus functions to produce
 a) Lymph b) Endolymph
 c) Cerebrospinal fluid d) All of these
269. Along with hypothalamus, limbic system is involved in the
 I. thermoregulation
 II. regulation of sexual behavior
 III. expression of emotional reactions (*e. g.*, excitement, pleasure, rage and fear)
 IV. motivation
 Choose the correct option
 a) All except I b) Only I c) I, III and IV d) I, III and IV
270. Alzheimer's disease in human is associated with the deficiency of
 a) Dopamine b) Glutamic acid
 c) Acetylcholine d) Gamma Amino Butyric Acid (GABA)
271. Which of the following is a neuroglial cell?
 a) Astrocytes b) Oligodendrocytes c) Microgila d) All of these
272. Outer ear of humans consists of
 a) Pinna b) External auditory meatus
 c) Both (a) and (b) d) Labyrinth
273. In eye donation, which one of the following parts of donor's eye is utilized?
 a) Retina b) Cornea c) Lens d) Iris
274. At the neuromuscular function
 a) The muscle membrane possesses musculariae receptors
 b) The motor nerve endings secrete norepinephrine
 c) Curare leads to prolongation of neuromuscular transmission
 d) The motor nerve endings secrete acetylcholine
275. Lipofucsin granules are found in
 a) Nerve cell b) Cardiac muscle c) Red muscle d) Cartilage
276. Brain stem is formed by
 a) Midbrain and forebrain b) Forebrain and hindbrain
 c) Midbrain and hindbrain d) All of the above
277. Corti's organs is present in

- a) Reissner's membrane b) Scala vestibuli
c) Basilar membrane d) Middle lamella
278. In parasympathetic nervous system, which of following is released?
a) Epinephrine b) Norepinephrine c) Serotonin d) Acetylcholine
279. Following are the steps of mechanism of vision in random order
I. Neural impulses are analysed and image formed on retina is recognised by visual cortex
II. Membrane permeability changes
III. Ganglion cells are excited
IV. Bipolar cells are depolarized
V. Action potential (impulse) is transmitted by optic nerves to visual cortex
VI. Potential differences are generated in the photoreceptor cells
VII. Light energy causes a change in shape of rhodopsin, leading to the dissociation of retinal (an aldehyde of vitamin-A) from opsin (a protein)
VIII. Structure of opsin is changed
Choose the correct sequence
a) I, II, III, IV, V, VI, VII, VIII b) VIII, VII, VI, V, IV, III, II, I
c) I, IV, III, II, VII, VIII, VI, V d) VII, VIII, II, VI, IV, III, V, I
280. Nerve cells do not divide because they do not have
a) Nucleus b) Centrosome c) Golgi body d) Mitochondria
281. Arbor vitae is part of
a) Cerebrum b) Cerebellum c) Midbrain d) Forebrain
282. In the given diagram, identify the components of CNS from the codes given below
- 
- Codes**
a) B and C b) B and D c) C and D d) A and D
283. Vitreous humour is
a) Colloid b) Watery fluid
c) Mucoid connective tissue d) All of the above
284. Sense of smell is perceived by
a) Pituitary b) Hypothalamus c) Olfactory lobe d) Cerebrum
285. In the central nervous system
a) White matter contains many nerve cell bodies
b) The myelin sheaths are formed by Schwann cells
c) The neurons are protected from changes in plasma composition
d) The cerebrospinal fluid (CSF) is an ultrafiltrate of plasma
286. Meissner's corpuscles occur in
a) Brain b) Nerve cells c) Skin d) Tongue
287. The wall of the human eyeball is composed of
a) Sclerotic, choroid and retinal layer b) Sclera, cornea and choroid
c) Sclera, cornea and ciliary body d) Sclera, choroid and iris
288. Thermoregulatory centre of human body is associated with
a) Cerebrum b) Cerebellum c) Hypothalamus d) Medulla oblongata
289. The axons transmit nerve impulses from the cell body to a

- a) Synapse
c) Axon of another cell
- b) Dendrite of the same cell
d) All of these
290. Grey matter of the brain is
I. present outside the white matter
II. matter containing medullated nerve fibres
III. grey in colour
IV. matter containing cell bodies
Which of the statements mentioned above are correct?
a) Only I b) Only II c) I, III and IV d) II, III and IV
291. 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
292. Pneumotaxic centre which can moderate the functions of the respiratory rhythm centre is present at
a) Pons region of brain b) Thalamus
c) Spinal cord d) Right cerebral hemisphere
293. Which of the following cranial nerves is present in rabbit but absent in frog?
a) Glossopharyngeal b) Hypoglossal c) Olfactory d) Optic
294. Hypothalamus does not control
a) Hunger and satiety b) Thermoregulation c) Osmoregulation d) Emotions
295. Arrange the following events in a correct order that lead to the formation of an auditory impulse in human ears from the codes given below
I. Vibration is transferred from the malleus to the incus and then to stapes
II. Basilar membrane moves up and down
III. Nerve impulse is transmitted by cochlear nerve to auditory cortex of brain for impulse analysis and recognition
IV. Sound waves pass through ear canal
V. Stereocilia of hair cells of organ of Corti rub against tectorial membrane
VI. Sound waves causes ear drum to vibrate
VII. Nerve impulse is generated
VIII. Vibrations move from fluid of vestibular canal to the fluid tympanic canal
IX. Membrane at oval window vibrates
- Codes**
a) IV, VI, I, IX, VIII, II, V, VII, III b) I, II, III, IV, V, VI, VII, VIII, IX
c) IX, VIII, VII, VI, V, IV, III, II, I d) IV, VI, I, VIII, IX, II, V, VII, III
296. Which is the largest body cell?
a) Neurons b) RBCs c) Osteocytes d) Sperms
297. Which one of the following pairs of structures distinguishes a nerve cell from other types of cell?
a) Perikaryon and dendrites b) Vacuoles and fibres
c) Flagellum and medullary sheath d) Nucleus and mitochondria
298. Identify the parts labelled as *A* and *E* and choose the correct option for the diagrammatic representation of reflex action showing knee-jerk reflex



- a) A-Dorsal root ganglion, B-White matter, C-Gray matter, D-Afferent pathway, D-Efferent pathway
- b) A-Dorsal root ganglion, B-White matter, C-Gray matter, D-Efferent pathway, D-Afferent pathway
- c) A-Dorsal root ganglion, B-Gray matter, C-White matter, D-Efferent pathway, D-Afferent pathway
- d) A-Ventral root ganglion, B-White matter, C-Gray matter, D-Efferent pathway, D-Afferent pathway

299. The medulla contains centres which control

- a) Respiration
- b) Cardiovascular reflexes
- c) Gastric secretions
- d) All of the above

300. Cranium is the protective covering of

- a) Lungs
- b) Eye balls
- c) Brain
- d) Uterus

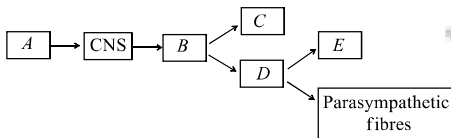
301. The number of cranial nerves in frog and man is

- a) 10 and 12
- b) 12 and 10
- c) 10 and 8
- d) 8 and 10

302. The chemical used by doctors to dilate pupil for examination is

- a) Pilocarpine
- b) Atropine
- c) Actinomycin-D
- d) Acetylcholine

303. Select the correct arrangement of fibres (A – E) in the diagram given below



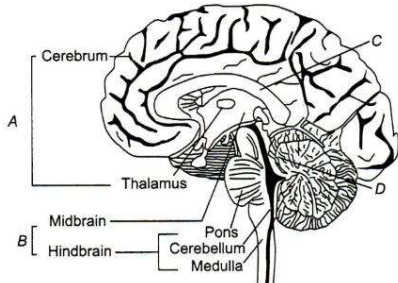
- a) A-Afferent, B-Efferent, C-Somatic motor, D-Autonomic, E-Sympathetic
- b) A-Efferent, B-Afferent, C-Somatic motor, D-Autonomic, E-Sympathetic
- c) A-Afferent, B-Efferent, C-Autonomic, D-Somatic motor, E-Sympathetic
- d) A-Efferent, B-Afferent, C-Autonomic, D-Somatic motor, E-Sympathetic

304. Identify the wrong pair

- a) Corpus luteum-Progesterone
- b) Interstitial cells-Testosterone
- c) Hypothalamus-FSH
- d) Acrosome - Hyaluronidase

305. Given is the diagram of human brain

Identify A, B, C and D correctly



- a) A-Forebrain, B-Brain stem C-Corpus callosum, D-Cerebral aqueduct
- b) A-Forebrain, B-Brain stem C-Cerebral aqueduct, D-Corpus callosum
- c) A-Forebrain, B-Brain stem C-Corpus callosum, D-Cerebral aqueduct
- d) A-Forebrain, B-Brain stem C-Cerebral aqueduct, D-Corpus luteum

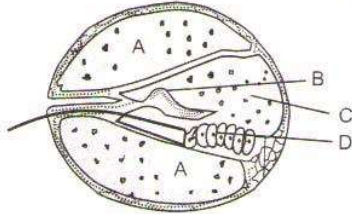
306. A synapse is formed by the membrane of

- a) Presynaptic axon and a postsynaptic dendrite
- b) Presynaptic dendrite and postsynaptic axon
- c) Presynaptic dendrite and postsynaptic dendrite
- d) None of the above

307. A neuron is said to be in resting state when,
 I. it is not conducting any impulse
 II. plasma membrane is electrically positive outside and negative inside
 III. the nerve fibre is stimulated mechanically or electrically
 IV. plasma membrane is negative outside and positive inside
 The correct option is
 a) III and IV b) I and IV c) II and III d) I and II
308. Patients suffering from cholera are given a saline drip because
 a) Na^+ ions help in stopping nerve impulses and hence, sensation of pain
 b) Na^+ ions help in the retention of water in the body tissues
 c) NaCl is an important component of energy supply
 d) NaCl furnishes most of the fuel required for cellular activity
309. Which part of retina consists of only cones?
 a) Fovea centralis b) Optic nerve c) Blind spot d) Chiasmata
310. Following are some nerves. Categorise them as afferent, efferent and mixed nerves according to their nature and then choose the correct option from the codes given below
 I. Trigeminal nerves
 II. Oculomotor nerves
 III. Olfactory nerves
 IV. Auditory cranial nerves
 V. Hypoglossal cranial nerves
 VI. Spinal accessory cranial nerves
 VII. Optic nerves
 VIII. Abducens nerves
 IX. Pathetic nerves
 X. Glossopharyngeal nerves
 XI. Vagus cranial nerves
 XII. Spinal nerves
 XIII. Facial nerves
- Codes**
Afferent nerves Efferent nerves Mixed nerves
 a) III, VII, IV II, IX, VIII, VI, V I, XIII, X, XI, XII
 b) I, XIII, X, XI, XII III, VII, IV II, IX, VIII, VI, V
 c) II, IX, VIII, VI, V I, XIII, X, XI, XII III, VII, IV
 d) III, VII, VIII XIII, XI, V, VI I, II, IV, IX, X, XII
311. The glands, which help on absorbing odoriferous substances to stimulate olfactory nerve are
 a) Cerumenous glands b) Meibomian glands c) Bowman's glands d) Cowper's glands
312. Which of the following is motor nerve?
 a) Accessory spinal b) Vagus c) Trigeminal d) Facial
313. True about electrical synapses
 I. pre and postsynaptic neurons are in very close proximity
 II. pre and postsynaptic neurons are separated by synaptic cleft
 III. impulse transmission is very fast
 IV. electrical synapses are common in our system
 Select the correct option
 a) I, II, III and IV b) I and III c) II and IV d) I and II
314. If frog's brain is crushed, even than its leg moves on pinpointing. It called as
 a) Conditional reflex b) Simple reflex
 c) Neurotransmitter function d) Autonomic nerve conditions

315. Which of the following statements is correct about the nodes of ranvier?
 a) Axolemma is discontinuous
 b) Myelin sheath is discontinuous
 c) Both neurilemma and myelin sheath are discontinuous
 d) Covered by myelin sheath
316. Inner part of cerebral cortex is referred as
 a) White matter
 b) Grey matter
 c) Both (a) and (b)
 d) Non-myelinated nerve fibres
317. Brains acts as the ...A... and ...B... system.
 Here, A and B refer to
 a) Command; control
 b) Voluntary; involuntary
 c) Compound; voluntary
 d) Control; involuntary
318. Old age far sightedness is a defect of eye in which
 a) Lens becomes opaque
 b) Eyeball becomes small
 c) Eyeball becomes long
 d) Lens loses its elasticity
319. Muller's fibres occurs in
 a) Heart
 b) Kidney
 c) Pancreas
 d) Retina
320. Memory is the responsibility of
 a) Grey matter
 b) White matter
 c) Cerebrum
 d) Cerebellum
321. Intercellular communication in multicellular organism occurs through
 a) Digestive system only
 b) Respiratory system only
 c) Nervous system only
 d) Both nervous and endocrine system
322. Which of the following statements are is correct?
 I. Dendrites are long fibre, with branched distal end
 II. Axons are short fibres which arise from the cell body
 III. Cell body of a neuron contains cytoplasm, nucleus with cell organelles and Nissl's granules
 IV. The dendrites transmits nerve impulses away from the cell body to a synapse
 The correct option is
 a) Only III
 b) I and II
 c) I, II and III
 d) I, II and IV
323. The rods and cones of the retinal layer of eye are modified
 a) Hairs
 b) Unipolar neurons
 c) Bipolar neurons
 d) Multipolar neurons
324. 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
325. Synaptic vesicles contains chemicals called
 a) Synaptic fluid
 b) Neurotransmitters
 c) Vesicular fluid
 d) All of these
326. The neurons may be
 a) Multipolar
 b) Bipolar
 c) Unipolar
 d) All of these
327. The outermost covering of brain is
 a) Duramater
 b) Arachnoid
 c) Pigamater
 d) Choroid layer
328. In humans, tympanic membrane (ear drum) separates lympanic cavity from
 a) Pinna
 b) Auditory meatus
 c) Eustachian tube
 d) Cochlea
329. At their resting stage, the body cells exhibit a potential of -5 to -100 mV known as

- a) Polarization b) Resting potential c) Repolarization d) Depolarization
330. Our paired eyes are located in sockets of the skull called
 a) Orbits b) Cornea c) Iris d) Lens
331. The decoding and interpretation of visual information is carried out by which part of the brain?
 a) Cerebellum b) Frontal lobe c) Parietal lobe d) Occipital lobe
332. Given below is a diagrammatic cross-section of a single loop of human cochlea.



Which one of the following options correctly represents the name of three different parts?

- a) A-Tectorial membrane B-Perilymph
 C-Secretory cells D-Endolymph
- b) A-Endolymph B-Sensory hair cells
 C-Serum D-Tectorial membrane
- c) A-Sensory hair cells B-Endolymph
 C-Tectorial membrane D-Perilymph
- d) A-Perilymph B-Tectorial membrane
 C-Endolymph D-Organ of Corti
333. For the maintenance of ionic gradients across the resting membrane, the sodium-potassium pump transports
 a) 3Na^+ outwards for 2K^+ into the cell b) 2Na^+ outwards for 2K^+ into the cell
 c) 3Na^+ inwards for 2K^+ out the cell d) 2Na^+ inwards for 2K^+ out the cell
334. 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
335. Excessive stimulation of vagus nerve in humans may lead to
 a) Hoarse voice b) Peptic ulcers
 c) Efficient digestion of proteins d) Irregular contraction of diaphragm
336. Pupil, is the aperture surrounded by the
 a) Ciliary body b) Connective tissue c) Iris d) Choroid
337. In which direction, cristae of rabbit ear helps in maintaining balance?
 a) Circular position of longitudinal axis of semi circular canals
 b) Transverse position of longitudinal axis of semi circular canals
 c) Parallel to longitudinal axis of semi circular canals
 d) All of the above
338. The inner parts of cerebral hemispheres and a group of associated deep structures like amygdala, hippocampus, etc. form a complex structure called
 a) Arbor vitae b) Limbic lobe/limbic system
 c) Corpora quadrigemina d) Reticular system
339. Rhodopsin is also known as visual
 a) Red b) Yellow c) Brown d) Purple
340. What are the two types of nervous system cells?
 a) Alveoli and veins b) Alveoli and bronchioles
 c) Neurons and nephrons d) Neurons and glia
341. Which of the following statements is true?

- a) Saltatory conduction is seen in non-myelinated nerve fibres
 b) Nissl's granules are found in muscles fibres
 c) Non-myelinated nerve fibres do not possess nodes of Ranvier
 d) Non-myelinated nerve fibres are completely enclosed by myelin sheath
342. Nerve cells do not possess
 a) Neurilemma b) Sarcolemma c) Dendrite d) Axon
343. Which of the following is an example of conditioned reflex?
 a) Breast feeding b) Swallowing of food
 c) Blinding of eyes d) Salivation in dog on seeing bread
344. Select the correct arrangement of neural organization, according to the increasing degree of complexity
 a) Lower invertebrates → Vertebrates → Insects b) Lower invertebrates → Insects → Vertebrates
 c) Vertebrates → Insects → Lower vertebrates d) Vertebrates → Lower invertebrates → Insects
345. 'Organ of Jacobson' helps in
 a) Touch b) Vision c) Smell d) Hear
346. The nerve cells exercise its control by sending electrical signals called
 a) Afferent nerve impulses b) Efferent nerve impulses
 c) Electrical impulses d) Nerve impulses
347. Synapse is the connection between
 a) Two axon b) Two dendrites c) Axon and dendrites d) Two neurons
348. A person went to ophthalmologist. He had a problem in reading because he was not able to
 a) Contract his iris b) Contract ciliary muscle
 c) Contract his pupil d) Contract his ligaments
349. The size of pupil is controlled by the
 a) Ciliary muscles b) Suspensory ligaments
 c) Cornea d) Iris muscles
350. Which of the following is correct regarding electrical synapses?
 I. Pre and postsynaptic membrane neurons are in very close proximity at electric synapse
 II. Electric current are involved in the transmission of impulses
 III. Transmission of an impulse across electrical synapses is very similar to impulse conduction along a single axon
 IV. Impulse transmission is always faster in electric synapse than that across a chemical synapse
 V. Electrical synapses are rare in our system
 The correct option is
 a) I, II, III and IV b) I, III, IV and V c) I, II and IV d) I, II, III, IV and V
351. Which of the following is present in rod cells and useful in night vision?
 a) Vitamin-K b) Melanin c) Rhodopsin d) Vitamin-C
352. nerve fibre is enclosed by a Schwann cell that do not form a myelin sheath around the axon
 a) Afferent b) Unmyelinated c) Myelinated d) Efferent
353. In the resting stage of a neuron, concentration gradient generates due to
 a) High concentration of K^+ and low concentration of Na^+ inside the axon
 b) High concentration of Na^+ and low concentration of K^+ inside the axon
 c) low concentration of Na^+ outside the axon
 d) low concentration of K^+ outside the axon
354. Scala vestibuli, scala media and scala tympani of human ear contains
 a) Perilymph, endolymph and perilymph respectively
 b) Endolymph, perilymph and endolymph respectively
 c) Perilymph, endolymph and endolymph respectively
 d) Perilymph, haemolymph and endolymph respectively
355. An action potential in the nerve fibre is produced when positive and negative charges on 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

356. Nissl's granules are found in

- a) Cell body
- b) Dendrites
- c) Both (a) and (b)
- d) Axon

357. Which statements are wrong?

I. Synaptic cleft of neurons secrete 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 myelin sheath.

IV. Spinal cord and cranial nerves are made of non-myelinated nerve fibres.

Of the four statements,

- a) I, II are correct but III and IV are incorrect
- b) I, II and III are correct but IV is incorrect
- c) III and IV are correct but I and II are incorrect
- d) II and III are correct but I and IV are incorrect

358. The central information processing organ of our body is

- a) Heart
- b) Spinal cord
- c) Brain
- d) All of the above

359. Which of the following statements are correct for cones of human eye?

I. Cones are responsible for daylight vision

II. Cones are responsible for colour vision

III. Cones are responsible for photopic vision

Choose the correct option

- a) Only I
- b) I and II
- c) II and III
- d) I, II and III

360. During synaptic excitation

- a) The membrane potential of the post-synaptic cell hyperpolarizes
- b) The epsps are all or none in nature
- c) The epsps can summate
- d) After an epsp the photosynaptic cell passes through a refractory period

361. Which of the following is correct for the pairs of cervical nerves and number of cervical vertebrae respectively?

- a) 8 and 7
- b) 16 and 7
- c) 7 and 7
- d) 7 and 16

362. The nerve fibre in its resting stage is

- a) More permeable to K^+
- b) Semi-permeable to K^+
- c) Less permeable to K^+
- d) All of these

363. Movement of tongue muscle is controlled by

- a) Facial nerve
- b) Trigeminal nerve
- c) Hypoglossal nerve
- d) Vagus nerve

364. Alimentary canal is supplied by

- a) Olfactory
- b) Optic
- c) Trigeminal
- d) Vagus

365. The retina of nocturnal birds contain

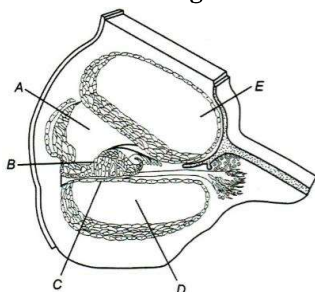
- a) Cones only
- b) Rods only
- c) Both (a) and (b)
- d) None of these

366. What is the space between arachnoid and piamater?

- a) Supra-arachnoid space
- b) Sub-arachnoid space
- c) Sub-dural space
- d) Meninges

367. Choose the odd pair out in the following.

- a) Areolar connective tissue-Collagen
c) Neuron-Melanin
368. Sympathetic nervous system controls
a) Erections of hairs b) Whitening of hairs c) Withdrawl of hairs d) All of the above
369. Dendrites are
a) Branched short fibres
c) Nissl's granules containing body
370. Sensation of stomach pain is due to
a) Interoceptors b) Exteroceptors c) Proprioceptors d) Teloceptors
371. ...A... is attached to the tympanic membrane and the ...B... is attached to the oval window of the cochlea
Choose the correct option for A and B
a) A-Malleus, B-stapes b) A-Malleus, B-incus c) A-Stapes, B-malleus d) A-Incus, B-stapes
372. In which part of the brain, satiety centres is present?
a) Cerebellum b) Medulla oblongata c) Cerebral hemisphere d) Hypothalamus
373. Which of the following is correct for lens focusing while seeing distant object?
a) Tightly stretched suspensory ligament and rounded lens
b) Contracted ciliary muscles and rounded lens
c) Relaxed ciliary muscles and tightly stretched suspensory ligament
d) Contracted ciliary muscles and relaxed suspensory ligaments
374. Below is the diagram of the sectional view of cochlea of human ear. Identify A and E



Choose the correct option

- a) A-Scala media, B-Organ of Corti, C-Basiliar membrane, D-Scala tympani, E-Scala vestibuli
b) A-Scala vestibuli, B-Organ of Corti, C-Basiliar membrane, D-Scala tympani, E-Scala media
c) A-Scala vestibuli, B-Basiliar membrane, C-Organ of Corti, D-Scala tympani, E-Scala media
d) A-Scala vestibuli, B-Basiliar membrane, C-Scala tympani, D-Organ of Corti, E-Scala media
375. The cell body of neuron contains certain granular bodies called
a) Cell granules b) Neuro cells c) Nissl's granules d) Neurogranules
376. Pinna
a) Collects the vibrations in the air which produce sound
b) Are wax secreting glands
c) Increase the efficiency of transmission of sound waves to the inner ear
d) All of the above
377. Light sensitive cells of eye are present in
a) Retina b) Cornea c) Iris d) Choroid
378. Which of the following statements are incorrect?
I. The space between cornea and lens is filled with watery fluid
II. Rhodopsin is red protein, hence called visual red
III. The anterior transparent portion of choroid is called cornea
IV. When all cones are stimulated equally, a sensation of no light (dark) is produced
Choose the correct option
a) Only II b) I and III c) All are correct d) All except II

379. In *Hydra*, neural organization is comprises of
 a) Network neurons b) CNS and PNS c) CNS d) PNS
380. Schwann cell is found around
 a) Axon b) Cyton c) Dendrite d) Dendron
381. The human ear is equipped to register sounds of frequencies between
 a) 20 to 20,000 cycles per second b) 1000 to 2000 cycles per second
 c) 5000 to 7000 cycles per second d) 5,000 to 10,000 cycles per second
382. I. The endocrine system provides chemical integration through hormones
 II. The neural system provides an organised network of point to point connection for a quick coordination
 III. The neural organization is very complex in lower invertebrates
 IV. The human neural system includes CNS and PNS
 Select the correct statements
 a) Only I b) I and II c) I, II and IV d) I, II and III
383. The tract of nerve fibres which connects the cerebral hemisphere is
 a) Corpus luteum b) Corpus callosum
 c) Corpora quadrigemina d) Cerebral aqueduct
384. Eustachian canal connects
 a) Middle ear with external ear b) Middle ear with internal ear
 c) External ear with internal ear d) Pharynx with middle ear
385. Which has H-shaped grey matter?
 a) Cerebrum b) Medulla oblongata c) Cerebellum d) Spinal cord
386. Which part of CNS mainly controls the reflex?
 a) Cerebellum b) Pons c) Spinal cord d) Cerebral aqueduct
387. Respiratory control centre is
 a) Cerebellum b) Medulla oblongata c) Spinal cord d) cerebrum
388. Olfactoreceptors are
 a) Touch receptors b) Pain receptors
 c) Smell receptors d) Pressure receptors
389. In nerve fibre, the impulses transmits quickly due to
 a) Myelin sheath b) Nodes of Ranvier c) Both (a) and (b) d) None of the above
390. Labyrinth, fluid-filled inner ear consists of
 a) Bony labyrinth b) Membranous labyrinth
 c) Both (a) and (b) d) Ear drum
391. The sound producing organ of bird is
 a) Oropharynx b) Nasopharynx c) Glottis d) Syrinx
392. Reflex arc in the nervous system means
 a) A functional unit consisting of a receptor neural pathway and an effector neuron
 b) Peripheral nerves, spinal cords and brain
 c) A homeostatic system of sensory nerves, synapses and motor nerves
 d) An inherited behaviour pattern that functions through a certain neural pathway
393. Salivation in man is under the control of
 a) Medulla oblongata b) Mesencephalon c) Hypothalamus d) Cerebellum
394. Static equilibrium is maintained by
 a) Utriculus b) Sacculus
 c) Both (a) and (b) d) Semi-circular canals
395. Human ears perform sensory functions. These are
 a) Hearing organs b) Maintenance of body balance
 c) Both (a) and (b) d) Voice production

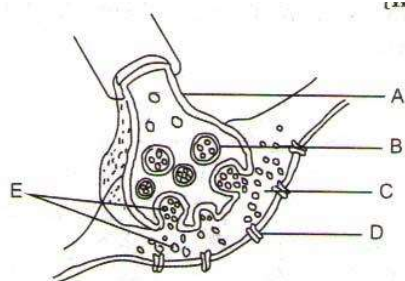
396. When a neuron is in resting state, *i. e.*, not conducting any impulse, the axonal membrane is
 a) Equally permeable to both Na⁺ and K⁺ ions
 b) Impermeable to both Na⁺ and K⁺ ions
 c) Comparatively more permeable to K⁺ ions and nearly impermeable to Na⁺ ions
 d) Comparatively more permeable to Na⁺ ions and nearly impermeable to K⁺ ions
397. Different cranial nerves, with their respective functions are given below. Choose the correct option from the codes given below

Name	Function
I. Hypoglossal	Hearing equilibrium
II. Glossopharyngeal	Movements of pharynx, larynx, neck, and shoulder
III. Pathetic	Rotation of eyeball
IV. Oculomotor	Movement of eyeball

Codes

- a) I and II b) II and IV c) III and IV d) I, II, III and IV
398. In humans, gustatoreceptors are found in
 a) Eyes b) Ears c) Tongue d) Stomach
399. 'Pons Varolii' connects the
 a) Two cerebral hemispheres b) Two lobes of cerebellum
 c) Cerebrum and cerebellum d) Spinal cord with the brain
400. There are different types of cones to human eye that responds to
 a) Red and green lights b) Green and blue lights
 c) Red and blue lights d) Red, green and blue lights
401. Cerebrospinal fluid is present
 a) Beneath the piamater b) Between piamater and arachnoid
 c) Between arachnoid and duramater d) In extra duramater
402. Unipolar neurons can be seen in the
 a) Embryonic stage b) Cerebellum c) Cerebral cortex d) Retina of eye
403. Which is thickened to form organ of Corti?
 a) Reissner's membrane b) Basilar membrane
 c) Tectorial membrane d) All of these
404. Which of the following cells are associated with identification of colours in bright light?
 a) Rod cells b) Cone cells c) Both (a) and (b) d) None of these
405. Synapses are of two types namely ...A... synapses and ...B... synapses. Here A and B refers to
 a) Neuron-neuron, chemical b) Electrical, chemical
 c) Neuron-neuron, electrical d) Electrochemical, neuron
406. Select the correct statements
 a) Neurons regulates endocrine activity but not *vice-versa*
 b) Endocrine glands regulates neural activity but not *vice-versa*
 c) Endocrine glands regulates neural activity and nervous system regulates endocrine glands
 d) Neither hormones control neural activity nor the neurons control the endocrine activity
407. Which one of the following does not act as a neurotransmitter?
 a) Acetylcholine b) Epinephrine c) Norepinephrine d) Cortisone
408. Damage to hearing is caused by sound which exceeds
 a) 70 decibels b) 100 decibels c) 110 decibels d) 120 decibels
409. Choroid becomes thick in the anterior part of eye to form the
 a) Iris b) Ciliary body c) Pupil d) Lens
410. Gustatoreceptors are

- a) Rod cells of eyes
c) Epithelium of skin
- b) Taste buds of tongue
d) Cone cells of eye
411. A man is admitted in a hospital. He is suffering from an abnormally low body temperature, loss of appetite and extreme thirst. His brain scan would probably show a tumour in
a) Medulla oblongata b) Pons Varolii c) Cerebellum d) Hypothalamus
412. Eustachian tube connects ...A... cavity with ...B...
Choose the correct option for A and B
a) A-outer ear; B-pharynx
c) A-pinna; B-pharynx
b) A-inner ear; B-pharynx
d) A-middle ear; B-pharynx
413. The autonomic nervous system has control over
a) Reflex action
c) Sense organs
b) Skeletal muscles
d) Internal organs
414. How many pairs of cranial nerves originate from the brain of rabbit?
a) 12 b) 8 c) 9 d) 11
415. The gelatinous, elastic membrane covering the sensory hair cells of the human ear is known as
a) Basilar membrane
c) Reissners's membrane
b) Tectorial membrane
d) Neuro-sensory membrane
416. The joint between axon of a neuron and the dendrite of the next is called
a) Synapse b) Bridge c) Junction d) Joint
417. Reflex action is controlled by
a) ANS b) CNS c) Both (a) and (b) d) None of the above
418. In the following diagram showing axon terminal and synapse A, B, C, D and e respectively represents



- a) A-axon terminal B-synaptic cleft C-synaptic vesicles D-neurotransmitters
E-receptors
- b) A-axon terminal B-synaptic cleft C-synaptic vesicles D-receptors
E- neurotransmitters
- c) A-synaptic cleft B-synaptic vesicles C-axon terminal D- neurotransmitters
E-receptors
- d) A-synaptic cleft B-axon terminal C-synaptic vesicles D- neurotransmitters
E-receptors
419. Cerebellum portion of brain is
a) Concerned with the maintenance of posture/equilibrium
b) Responsible for olfactory functions
c) Controls optic functions
d) Both (a) and (c)
420. Choose the correct option from the codes given below
I. Nearly 50% of all brain cells are neuroglia

- II. Oligodendrocytes plays a role in the maintenance of the blood brain barrier
- III. Microglia engulf microbes and cellular debris
- IV. Astrocytes, oligodendrocytes and microglia, are three different types of neuroglial cells

Codes

- a) I and IV are correct only
- b) II and IV are correct only
- c) All are incorrect
- d) All are correct

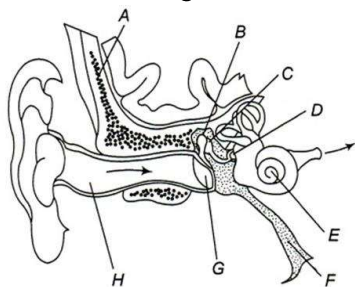
421. The bones lie inferior to the parietal bones and meet them at the squamous sutures is
 a) Frontal bone b) Temporal bone c) Occipital bone d) Parietal bone
422. Choroid plexus is a network of
 a) Capillaries b) Muscle fibres c) Nerves d) Lymph vessels
423. Which part of brain is associated with strong emotions?
 a) Limbic system b) Medulla c) Cerebellum d) Cerebral cortex
424. The human brain is well protected by the
 a) Skull b) Meninges c) Hairs d) Piamater
425. A wave of action potential is termed as
 a) Sensory impulse b) Nerve impulse c) Activation impulse d) Motor impulse
426. The sensations of different colours in human eye is produced due to the combination of
 a) Rods and their photopigments b) Red and blue lights
 c) Cones and their photopigments d) Red and green lights
427. Olfactory smell area is present in
 a) Frontal lobe b) Parietal lobe c) Temporal lobe d) Occipital lobe
428. The function of vagus nerve innervating the heart is to
 a) Initiate the heart beat b) Reduce the heart beat
 c) Accelerate the heart beat d) Maintain constant heart beat
429. Aqueduct of Sylvius occurs in
 a) Eye b) Heart c) Brain d) Ear
430. Nerve impulse initiates with the movement of
 a) K^+ b) Na^+ c) Ca^+ d) Mg^+
431. Given below is a table comparing the effects of sympathetic and parasympathetic nervous system for four features (a-d).which one feature is currently described?

Feature	Sympathetic Nervous System	Parasympathetic Nervous System
a) Salivary gland	Stimulates secretion	Inhibits secretion
c) Heart rate	Decreases	Increase

b) Pupil of the eye	Dilates	Constricts
d) Intestinal peristalsis	Stimulates	Inhibits

432. What is the location of hypothalamus?
 a) At the base of the cerebellum b) At the base of the thalamus
 c) Above the thalamus d) Above the cerebellum
433. Which is a bridge between nervous system and endocrine system?
 a) Thalamus b) Hypothalamus c) Limbic system d) Parietal lobe
434. Broca's area is connected with
 a) Learning and reasoning b) Speech function
 c) Receiving the impulses from eyes d) Sensation of smell
435. Myelinated fibres of the tract of pons forms
 a) Red matter b) Grey matter c) White matter d) Both (b) and (c)

436. The PNS includes
 a) Central neural system and sympathetic neural system
 b) Somatic neural system and autonomic neural system
 c) Only sympathetic neural system
 d) Only somatic neural system
437. 31 pairs of spinal nerves are known in man. Select the option which shows its correct classification into different groups
 a) Cervical-1 pair, thoracic-8 pair, lumber-12 pairs, sacral-5 pairs, coccygeal-5 pairs
 b) Cervical-8 pairs, thoracic-12 pairs, lumber-5 pairs, sacral-5 pairs, coccygeal-1 pairs
 c) Cervical-5 pairs, thoracic-5 pairs, lumber-5 pairs, sacral-8 pairs, coccygeal-1 pairs
 d) Cervical-5 pairs, thoracic-8 pairs, lumber-5 pairs, sacral-12 pairs, coccygeal-1 pairs
438. Cerebellum and medulla together constitutes
 a) Hindbrain
 b) Midbrain
 c) Forebrain
 d) Telencephalon
439. Hindbrain includes
 a) Pons
 b) Cerebellum
 c) Medulla oblongata
 d) All of the above
440. The complex system of the inner ear associated with maintenance of body balance is
 a) Cochlea
 b) Reissner's membrane
 c) Vestibular apparatus
 d) Basilar membrane
441. The one way or unidirectional transmission of nerve impulse in nerve cells is due to the presence of
 a) Synapses
 b) Myelin sheath
 c) Membrane polarity
 d) Interneurons
442. Post-ganglionic nerve fibres of sympathetic system are
 a) Adrenergic
 b) Cholinergic
 c) Both (a) and (b)
 d) None of these
443. The membrane, which cover the brain and spinal cord is/are called
 a) White matter
 b) Grey matter
 c) Peritoneum
 d) Meninges
444. Which one of the following is not a part of ear?
 a) Eustachian
 b) Cone cell
 c) Utriculus
 d) Sacculus
445. The ...A... is a structure located on the ...B... which contains ...C... that acts as auditory receptors
 Choose the correct option for A, B and C
 a) A-basilar membrane, B-tectorial membrane, C-hair cells
 b) A-basilar membrane, B-tectorial membrane, C-hair cells
 c) A-basilar membrane, B-hair cells, C-tectorial membrane
 d) A-organ of corti, B-basilar membrane, C-hair cells
446. Given is the diagram of ear. Identify A to H



Choose the correct option

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

- H-External auditory canal
d) A-Temporal bone, B-Malleus, C-Incus, D-Cochlea, E-Stapes, F-Eustachian tube, G-lympanic membrane,
H-External auditory canal
447. The posterior part of the retina, which is just opposite to the lens is
a) Cornea b) Yellow spot c) Fovea centralis d) Both (A) and (B)
448. Corpus callosum connects
a) Two cerebral hemispheres b) Two ventricles of brain
c) Two cerebellar hemispheres d) Two optic thalamus
449. The innermost layer of the human eye is
a) Choroid b) Cornea c) Sclera d) Retina
450. Which function will be lost due to damage of occipital lobe?
a) Hearing b) Speech c) Vision d) Memory
451. Neuron is composed of
a) Cell body b) Dendrites c) Axon d) All of these
452. Trigeminal nerve in frog is of
a) IV b) V c) VIII d) IX
453. Vomiting centre is located in the
a) Medulla oblongata b) Stomach and sometimes in duodenum
c) GI tract d) Hypothalamus
454. Mouth becomes watery when we look on the delicious food is due to
a) Olfactory response b) Hormonal response
c) Neural response d) Optic response
455. The sequence of ear ossicles from outside to inside is
a) malleus → incus → stapes b) incus → stapes → malleus
c) stapes → incus → malleus d) malleus → stapes → incus
456. In rhodopsin, the vitamin present is
a) Vitamin-B b) Vitamin-C c) Vitamin-A d) Vitamin-D
457. In human eyes, colour perception is done by
a) Rod cells only b) Cone cells only c) Both (a) and (b) d) Choroid layer cells
458. Path of reflex action is
a) Receptor → Brain → Muscles b) Receptor → Spinal cord → Muscles
c) Muscles → Receptor → Brain d) Muscles → Spinal cord → Muscles