لجنة الطب البشري

رُؤية تُنير دُروب تميّزكم

Third Year - Incomplete

Central Nervous System

Veins's Exams

1. **Which of the following arteries supply the thalamus?**
   A. Cerebral artery
   B. Basilar Artery
   C. Vertebral Artery
   D. Posterior Cerebral Artery
   E. Middle Cerebral Artery

   Answer: D

2. **Which of the following is a phagocytic cells?**
   A. Astrocytes
   B. Oligodendrocytes
   C. Microglia
   D. Ependyma
   E. Histiocytes

   Answer:C

3. **A 2 Year old child brought by his mother to the paediatric clinic . The mother states that her child head is abnormally enlarged with prominent veins on it , she also stated that her child eyes are always looking downward. Imaging of the brain revealed dilated fourth ventricle and absent cerebellum. What is the diagnosis of this child disease?**
   A. Chiari malformation
   B. Dandy Walker malformation
   C. Hydrocephalus ex vacuo
   D. Frontotemporal lobar degeneration
   E. Parkinson's disease

   Answer:B

4. **Which of the following drugs exerts its therapeutic effect by selectively inhibiting monoamine oxidase B (MAO-B), thereby preventing dopamine breakdown in the central nervous system?**
   A. Nicotine
   B. Rasagiline
   C. Levodopa
   D. Carbidopa
   E. Apomorphine

   Answer:B

5. **Which of the following occurs due to Morphine administration?**
   A. Decrease cAMP level
   B. Decrease postsynaptic K+ efflux
   C. Reduce presynaptic Ca++ efflux
   D. Activates Adenylyl cyclas

   Answer:A

6. **A 60 year old male patient suffers from a disc prolapse in L1 vertebra, Which segment of the spinal cord is being compressed?**
   A. L1
   B. L2
   C. L3
   D. L4
   E. L5

   Answer:E

7. **Which of the following statements is correct?**
   A. Spinoreticular tract is located in the dorsal column
   B. Spinotectal tract is located in the dorsal column
   C. Spinocerebelllar tract is located in the lateral column
   D. Gracille tract is located in the anterior column
   E. Rubrospinal tract is located in the anterior column

   Answer:C

8. **Which of the following is not a component of the open medulla?**
   A. Nucleus Ambiguus
   B. Nucleus solitaries
   C. Inferior salivatory nucleus
   D. Hypoglossal trigone
   E. internal arcuate fibers

   Answer:E

9. **Medial Longitudinal Bundle (MLB) connects the vestibular nucleus with all of the following except:**
   A. Oculomotor nucleus
   B. Trochlear nucleus
   C. Abducent nucleus
   D. Hypoglossal nucleus
   E. Spinal nucleus of accessory nerve

   Answer:D

10. Which of the following lemnisci ends at the level of inferior colliculus?

A. Trigeminal lemniscus
B. Spinal lemniscus
C. Medial lemniscus
D. Lateral lemniscus
E. non of the above

Answer:D

11. The ventral anterior nucleus of the thalamus receives afferent fibers from which of the following?

A. Cerebellar nuclei
B. Basal ganglia
C. Medial lemniscus
D. Premotor area
E. Post-central gyrus

Answer:B

12. Which of the following neurotransmitters is released from the spinal cord ,uterus and brain ?

A. Histamine
B. Serotonin
C. GABA
D. Glutamate
E. Dopamine

Answer:A

13. A 65 Year old patient who suffers from severe memory loss which started 7 months ago and progressed to severe dementia. The patients doesn't remember his own name , his wife name , where he lives and can't identify his sons. Sadly 1 year later the patient died due to aspiration pneumonia. On autopsy there was severe atrophy of the brain and the histopathological report stated that there is accumulation of an abnormal Extracellular A beta amyloid protein. Which of the following statements regarding the patient diagnosis is correct?

A. There is also accumulation of intracellular hyperphosphorylated 3R isoform of tau protein
B. Presenilin 1 and 2 mutation increase the risk for early onset disease
C. 95% of cases are familial
D. e4 allele apolipoprotein E decreases risk
E. e2 allele apolipoprotein E increases risk

Answer:B

14. Which one of the following is true regarding secondary hyperalgesia?

A. The pain threshold is decrease
B. Seen in the area of sun burn.
C. Is due to facilitation of sensory transmission
D. Occurs in injured damaged areas of the skin
E. Is exaggerated pain response to non-painful stimuli's

Answer:C

15. Which of the following statements is correct concerning the thalamus?

A. Anterior end-- Pulvinar
B. Posterior end--- Interventricular foramen of Monro
C. Superior surface -- hypothalmic sulcus
D. Inferior surface -- floor of body of lateral ventricle
E. posterior part-- medial geniculate body and Lateral geniculate body

Answer:E

16. Which of the following is correct regarding Ligamentum denticulatum?

A. Connects the pia mater to the arachnoid mater and dura mater
B. It has 31 teeth
C. Extends from the posterior median septum to the arachnoid mater
D. Two on each side of the cord
E. Contains fat, small arteries ,venous plexus and lymphatics

Answer:A

17. The anterior thalamic nucleus radiation goes to which of the following?

A. Cingulate gyrus
B. Hypothalamus
C. Postcentral gyrus
D. Broca's area
E. Amygdala

Answer:A

18. Lateral medullary syndrome involves all of the following except:

A. Cerebellar ataxia
B. Loss of pain & temperature from ipsilateral face
C. Loss of pain & temperature from ipsilateral half of the body
D. Ipsilateral paralysis of palate, pharynx, larynx
E. loss of taste sensation

Answer:C

19. Which of the following is correct regarding spinal nerves?

A. 12 anterior rami send white rami communicants to sympathetic ganglia
B. Both C1 rami are purely motor
C. Posterior rami supplies skin and muscles chest
D. Anterior rami form plexus except 11 thoracic
E. Posterior rami is large

Answer:B

20. Afferents from basal ganglia project to:

A. Anterior nucleus of thalamus.
B. Dorsomedial nucleus of thalamus.
C. Ventral anterior nucleus of thalamus.
D. Ventral posterior nucleus of thalamus.
E. Pulvinar.

Answer:C

21. The neurons that release serotonin as chemical transmitter along analgesia system Are located in:

A. Periaqueductal gray area.
B. Interneurons of the spinal cord.
C. Periventricular area.
D. Raphe magnus nucleus.
E. Synapse between first and second order neuron in neospinothalmic pathway.

Answer:D

22. Long-term potentiation of synapses:

A. Is involved in pain control system.
B. Results from reduced stimulation of synapses.
C. Results from repetitive stimulation of presynaptic neuron by noxious stimulus.
D. Is associated with decreased Ca 2+ concentration in postsynaptic neurons.
E. Involved in memory formation in the hippocampus.

Answer:E

Athar's Exams

Anatomy

Dr. Ashraf Ramzy

23. As regards the contents of the different parts of the internal capsule, choose the INCORRECT matching:

A. Sublentiform part - auditory radiation.
B. Posterior limb - superior thalamic radiation.
C. Retrolentiform part - parietopontine fibers.
D. Genu - corticospinal fibers.
E. Anterior limb - frontopontine fibers.

Answer: D

24. Middle cerebral artery supplies all the following EXCEPT:

A. Broca's area.
B. Temporal pole.
C. Posterior part of lentiform nucleus.
D. Superior frontal gyrus.
E. Upper ½ of anterior limb of internal capsule.

Answer: D

25. As regards the diencephalon, choose the CORRECT statement:

A. The geniculate bodies are related to the posterior part of its superior surface.
B. Its lateral surface forms the lateral wall of 3rd ventricle.
C. Its VPMN receives the medial lemniscus.
D. Its medial geniculate body projects auditory radiation to auditory cortex.
E. Its anterior part is supplied by thalamo-geniculate artery.

Answer: D

26. The following is an example of ascending projection fibers:

A. Fornix.
B. Superior thalamic radiation.
C. Uncinate fasciculus.
D. Tapetum.
E. Cortico-pontine fibers.

Answer: B

27. The following arteries share in the arterial supply of internal capsule Except:

A. Middle cerebral artery.
B. Anterior cerebral artery.
C. Posterior communicating artery.
D. Posterior choroidal artery.
E. Anterior choroidal artery.

Answer: D

28. Lateral medullary syndrome includes the following EXCEPT:

A. Ipsilateral cerebellag ataxia.
B. Ipsilateral paralysis of palate, pharynx & larynx.
C. Contralateral pain & temperature loss from face.
D. Ipsilateral Homer syndrome.
E. Ipsilateral loss of taste of posterior 1/3 of tongue.

Answer: C

29. A lesion in the anterior cerebral artery would most-likely result in an inability to:

A. Smile.
B. Close his eyes.
C. Swallow food.
D. Climb the stairs.
E. Clench a hand fist.

Answer: D

30. As regards the cortical function areas and their effect of lesion, choose the CORRE matching:

A. Frontal eye field - contralateral deviation of both eyes.
B. Premotor area - reappearance of grasp reflex.
C. Anterior part of paracentral lobule - loss of sensation of lower limb.
D. Inferior parietal lobule - inability to recognize familiar objects by touch.
E. Primary auditory area - ipsilateral loss of hearing.

Answer: B

31. The caudate nucleus and putamen form together the:

A. Striatum (neostriatum).
B. Pallidum (paleostriatum).
C. Basal nuclei.
D. Globus pallidus.
E. Corpus striatum.

Answer: A

32. Nucleus solitarius is supplied by:

A. Posterior inferior cerebellar artery.
B. Vertebral artery.
C. Anterior spinal artery.
D. Basilar artery.
E. Posterior spinal artery.

Answer: A

33. Choose the CORRECT matching:

A. Ganglion - a group of cell bodies within CNS.
B. Pathway - a chain of successive tracts having different functions.
C. Lemniscus - a collection of descending fibers within the brain stem.
D. Afferent - an output going away from a certain structure.
E. Tract - a bundle of nerve fibers within CNS.

Answer: E

34. The upper 9 thoracic vertebrae contain:

A. Upper 6 thoracic segments of spinal cord.
B. Upper 8 thoracic segments of spinal cord.
C. Upper 10 thoracic segments of spinal cord.
D. Lower 10 thoracic segments of spinal cord.
E. All thoracic segments of spinal cord.

Answer: E

35. Which of the following is purely sensory?

A. Ventral ramus of spinal nerve.
B. Dorsal root of spinal nerve.
C. Spinal nerve trunk.
D. Ventral root of spinal nerve.
E. Dorsal ramus of spinal nerve.

Answer: C

36. Injury of the right cortico-bulbar tract would affect muscles of:

A. Right upper quadrant of face.
B. Left upper quadrant of face.
C. Right lower quadrant of face.
D. Left lower quadrant of face.
E. Right ½ of tongue.

Answer: D

37. Choose the INCORRECT matching:

A. Spino-tectal tract - is responsible for spino-visual reflex.
B. Spinal lemniscus - carries crude touch & pressure.
C. Anterior spino-cerebellar tract - carries proprioception from lower limbs.
D. Axons of cuneate nucleus - Carries conscious proprioception from thumb.
E. VPMN of thalamus - receives termination of spinal lemniscus.

Answer: E

38. Anterior spinal artery supplies all the following structures Except:

A. Gracile nucleus.
B. Hypoglossal nucleus.
C. Pyramid.
D. Medial lemniscus.
E. Medial longitudinal bundle.

Answer: A

39. As regards dural venous sinuses, choose the INCORRECT matching:

A. Inferior petrosal sings - considered as an emissary vein.
B. Superior petrosal sinus - runs in free margin of tentorium cerebelli.
C. Straight sinus - lies at line of attachment of falx cerebri & tentorium cerebelli.
D. Sigmoid sinus - ends by forming internal jugular vein.
E. Transverse sinus - begins at internal occipital protuberance.

Answer: B

40. The structure that passes inside cavernous sinus is:

A. External carotid artery.
B. Maxillary nerve.
C. Trochlear nerve.
D. Mandibular nerve.
E. Abducent nerve.

Answer: E

Physiology

Dr. Shaima'a Nasr

41. A 45-year-old woman spent the evening in a sleep clinic after her husband had repeatedly expressed concern about her restlessness during the night which was keeping him awake. Which of the following pattern of changes in central neurotransmitters or neuromodulators are associated with transitioning from NREM to REM sleep?

A. Decrease in norepinephrine, increase in serotonin and increase in acetylcholine.
B. Decrease in norepinephrine, increase in acetylcholine and increase in histamine.
C. Decrease in norepinephrine, decrease in serotonin and increase in acetylcholine.
D. Increase in norepinephrine, increase in serotonin and decrease in GABA.
E. Increase in norepinephrine, decrease in serotonin and decrease in GABA.

Answer: A

42. Activation of the Purkinje cells of the cerebellum can be initiated by stimulation of which brain area?

A. Inferior olivary nucleus.
B. Brain stem reticular nuclei.
C. Neurons in red nucleus.
D. Superior olivary nucleus.
E. Dorsal vestibular nucleus.

Answer: A

43. The following manifestation can be seen in thalamic syndrome:

A. Thalamic analgesia.
B. Permanent loss of epicritic sensations.
C. Permanent loss of protopathic sensations.
D. Sensory ataxia only without motor incoordination.
E. Cerbellar ataxia only without sensory deficits.

Answer: B

44. Gradual decrease of postsynaptic response with repeated exposure to a benign stimulus is called:

A. Sensitization.
B. Habituation.
C. Post-tetanic potentiation.
D. Long term potentiation.
E. Long term depression.

Answer: B

45. Which of the following is the function of Papez circuit?

A. Control of emotional expressions.
B. Circadian rhythm regulation.
C. Switch between NREM and REM stages.
D. Planning of voluntary movements.
E. Damping the overshoot of movements.

Answer: A

46. Protopathic sensation means:

A. Tactile.
B. Crude touch.
C. Pain.
D. Sterognosis.
E. Two point discrimination.

Answer: B

47. Reticular activating system:

A. Is inhibited by motor cortex.
B. Leads to sleep when it is stimulated.
C. Is responsible for alert conscious state.
D. Is inhibited by limbic cortex.
E. Is inhibited by auditory impulses.

Answer: C

48. Which of the following best describes the failure to perform rapid alternating movements indicating a failure of "progression" from one part of the movement to the next?

A. Past-pointing.
B. Intention tremor.
C. Dysarthria.
D. Cerebellar nystagmus.
E. Dysdiadochokinesia.

Answer: E

49. Which of the following concerned with the execution of learned patterns of movement:

A. Caudate nucleus.
B. Putamen nucleus.
C. Internal globus pallidus.
D. Subthalamic nucleus.

Answer: B

50. Sharpening of signal caused by:

A. Lateral inhibition.
B. Reverberatory circuits.
C. Parallel multiple chain.

Answer: A

51. The skeletal muscle tone is maintained:

A. Static stretch reflex.
B. Dynamic stretch reflex.

Answer: A

52. Parallel multiple chain is example of :

Answer: After discharge.

Pathology

Dr. Mohammad Al-Wiswsy

53. Regarding the pathological features of diseases, ONE of the following matches is False:

A. Alzheimer disease - Neuritic plaques (amyloid core surrounded by dystrophic neurites) and neurofibrillary tangles.
B. Frontotemporal dementia — Atrophy of the frontal and temporal lobes, some subgroups characterized by specific inclusions consisting of accumulations of Lewy bodies.
C. Parkinsonism - Syndrome of motor disturbances seen caused by damage to dopaminergic neurons of the substantia nigra or to their projection to the striatum.
D. Amyotrophic lateral sclerosis - Reduction in the number of anterior horn cell throughout the length of the spinal cord with loss anterior root myelinated fibers and reactive gliosis.
E. Red neuron — Shrinkage nerve cell body with intense eosinophilia of the cytoplasm, pyknosis and angulation of the nucleus, disappearance of the nucleolus and loss of Nissl substance.

Answer: B

54. ONE of the following statements is CORRECT:

A. Progression of cingulate herniation is often accompanied by Duret hemorrhage.
B. Tonsillar herniation is displacement of the cerebral peduncles through the foramen magnum.
C. Transtentorial herniation is compression and herniation of the medial aspect of the parietal lobe against the free margin of the tentorium.
D. Subfalcine herniation occurs when unilateral expansion of a cerebral hemisphere displaces the frontal pole under the (lower free) edge of falx cerebri.
E. Transtentorial herniation results in compression of the posterior cerebral artery while subfalcine herniation results in compression of the anterior cerebral artery.

Answer: E

55. One of the following matches is False:

A. Parkinson disease - Lewy bodies inclusions containing Alpha-synuclein.
B. Alzheimer disease - Neuritic plaques (amyloid core surrounded by dystrophic neurites) and neurofibrillary tangles.
C. Amyotrophic lateral sclerosis - Reduction in the number of anterior horn cell throughout the length of the spinal cord with loss of anterior root myelinated fibers.
D. Huntington disease — Small brain showing variable degree of cortical atrophy, with widening of the cerebral sulci in the frontal, temporal, and parietal lobes.
E. Frontotemporal dementia — Atrophy of the frontal and temporal lobes, some subgroups characterized by specific inclusions consisting of abnormal accumulations of tau protein.

Answer: D

56. The CSF examination of an old man with neck stiffness reveals uniformly hemorrhagic bloody CSF, all the following are possible cause of such hemorrhage EXEPT:

A. Hematological disturbances.
B. Rupture of saccular (Berry) aneurysm.
C. Rupture of tumor in the subarachnoid space.
D. Bleeding from intracerebral arteriovenous malformation (AVM).
E. Intraventricular hemorrhage passing in to the subarachnoid space.

Answer: A

Pharmacology

Dr. Sherif Shaltout

57. A 72-year old woman recently diagnosed with Alzheimer disease started a pharmacotherapy with donepezil. Which of the following sets of adverse effects most likely occurred during the first days of treatment?

A. Hypertension, palpitations, hyperthermia.
B. Vomiting, diarrhea, bradycardia.
C. Dry mouth, dry skin, urine retention.
D. Drowsiness, lethargy, generalized fatigue.
E. Mydriasis, blurred vision, hypertension.

Answer: B

58. A 16-year-old girl was diagnosed with status epilepticus and she was given a drug IV that binds to the alpha subunit of GABA-A receptor complex. Which of the following drugs was most likely administered?

A. Lorazepam.
B. Zolpidem.
C. Flumazenil.
D. Phenytoin.
E. Valproic acid.

Answer: A

59. A 43-year-old man was given diazepam IV before the colonoscopy to induce a conscious sedation. Which of the following symptoms did the patient most likely experience upon recovery from sedation?

A. Nausca and vomiting.
B. Increased respiratory rate.
C. Anterograde amnesia.
D. Limb muscle spasms.
E. Hallucinations.

Answer: C

60. A 48 year old woman underwent surgery to remove a uterine myoma. General anesthesia was induced with propofol and maintained by sevoflorane and nitrous oxide. The blockade of which of the following receptors most likely mediated the effectiveness of nitrous oxide in this patient?

A. Nm cholinergic.
B. Alpha-1 adrenergic.
C. NMDA glutamatergic.
D. GABAergic.
E. 5-HT3 serotonergic.

Answer: C

61. Caffeine inhibits which of the following enzymes?

A. Adenylate cyclase.
B. Monoamine oxidase.
C. Cholinesterase.
D. Phosphodiesterase.
E. Phospholipase A2.

Answer: D

62. A 64-year-old man suffering from advanced heart failure was admitted emergency department because of extreme dyspnea over the past hour. After physical examination, a diagnosis of impending pulmonary edema was made, and an appropriate therapy was prescribed that included the intramuscular injection of morphine. Which of the following cardiovascular actions most likely contributed to the therapeutic effect of the drug in the patient's disorder?

A. Increased systolic pressure.
B. Constriction of the renal vascular bed.
C. Increased heart rate.
D. Peripheral venous dilation.
E. Increased left ventricular end-diastolic pressure.

Answer: D

63. A 35-year-old man admitted to the hospital because of a second-degree burn on his left forearm complained of increasing pain. An oral combination of acetaminophen/ codeine was administered for pain control. Which of the following statements best explain the reason for using this drug combination?

A. Codeine counteracts acetaminophen-induced hepatotoxicity.
B. Acetaminophen counteracts codeine-induced constipation.
C. The combination does not cause tolerance or dependence.
D. Acetaminophen speeds up the biotransformation of codeine into morphine.
E. The two drugs enhance each other's analgesic effects.

Answer: E

64. A baby boy, born after normal delivery, presented with respiratory depression, pinpoint pupils, and low Apgar scores. His mother received two intramuscular injections of an analgesic drug 3 and 2 hours before the delivery because of strongerratic and very painful contractions. Which of the following drugs would be appropriate for the baby at this time?

A. Flumazenil.
B. Theophylline.
C. Naloxone.
D. Caffeine.
E. Albuterol.

Answer: C

65. All the following are extrapyramidal symptoms, except:

A. Tremor.
B. Rigidity.
C. Dystonia.
D. Flaccid weakness.
E. Chorea.

Answer: D

66. A 52-year-old woman with a long history of Parkinson disease had been receiving levodopa/carbidopa.which of the following peripheral adverse effect most likely to occur?

A. Visual hallucinations.
B. Night mares.
C. Dyskinesia.
D. Cardiac arrhythmia.

Answer: D

Biochemistry

Dr. Nebras Melhem

67. A patient with a tumor of the adrenal medulla experienced palpitations, excessive sweating, and hypertensive headaches. His urine contained increased amounts of 5-hydroxyindoleacetic acid (5-HIAA). His symptoms are probably caused by an overproduction of which of the following?

A. Acetylcholine.
B. Norepinephrine and epinephrine.
C. Dopamine
D. Histamine.
E. Serotonin.

Answer: E

68. A patient with came to the clinic palpitations and aggressive behavior.His urine contains low level Homovanillylmandelic acid (HVA). His symptoms is most likely caused by an over production of which of the following:

A. Acetylcholine.
B. Norepinephrine and epinephrine.
C. Dopamine
D. Histamine.
E. Serotonin.

Answer: C

69. Which of the following enzymes is involved in the degradation of GABA in the brain?

A. Glutamate decarboxylase (GAD).
B. GABA transaminase (GABA-T).
C. Glutamine synthetase.
D. Glutamate dehydrogenase (GDH).
E. Aspartate aminotransferase.

Answer: B

70. Which of the following is incorrect regarding the Glutamate Glutamine cycle ?

A. Glutamine serves as, a reservoir for glutamate.
B. Uptake of glutamate by the astrocyte is favored over the active reuptake into presynaptic neurons.
C. The glia are essentially the only cells of the CNS that carry out the glutaminase reaction.
D. The hydrolysis of ATP to ADP and Pi favors the hydrolysis of glutamine to glutamate.
E. Ammonia is used to generate glutamine from glutamate.

Answer: C

Yaqeen's Exams

Anatomy

Dr. Ashraf Ramzy

71. Which one of the following is an afferent connection to the inferior colliculust:

A. Lateral lemniscus.
B. Spinal lemniscus.
C. Trigeminal lemniscus.
D. Medial lemniscus.
E. None of the above.

Answer: A

72. The cranial nerve nucleus that supplies muscles of the larynx is the:

A. Solitary nucleus.
B. Ambiguus nucleus.
C. Dorsal motor vagal nucleus.
D. Motor facial nucleus.
E. Spinal nucleus of V (trigerinal).

Answer: B

73. How many segments of the spinal cord lie in the vertebral column above the level of lower border of 4th thoracic vertebra (T4)?

A. 12 segments.
B. 13 segments.
C. 14 segments.
D. 15 segments.
E. 16 segments.

Answer: C

74. Choose the INCORRECT matching:

A. Spino-tectal tract - is responsible for spino-visual reflex.
B. Spinal lemniscus - carries crude touch & pressure.
C. Anterior spino-cerebellar tract - carries proprioception from lower limbs.
D. Axons of cuneate nucleus - Carries conscious proprioception from thumb.
E. VPMN of thalamus - receives termination of spinal lemniscus.

Answer: E

75. A patient having paraplegia with loss of pain sensation in spite of preservation of proprioception in both Tower limbs most likely has:

A. Completer transection of the spinal cord.
B. Anterior spinal artery occlusion.
C. Hemisection of the spinal cord.
D. Tabes dorsalis.
E. Poliomyelitis.

Answer: B

76. Upper motor neuron lesion is characterized by:

A. Hypotonia, X.
B. Paralysis of mustle & all types of movement.
C. Lost tendon jerksy.
D. +ve Babiniski sign.
E. Disuse atrophy of muscles.

Answer: D

77. As regards the pyramidal tract, choose the INCORRECT statement:

A. It passes in posterior limb of internal capsule.
B. It arises mainly from motor & premotor areas.
C. It descends as a compact bundle in basis pontis.
D. Its crossed fibers form lateral corticospinal tract.
E. In spinal cord, its cervical fibers are medial.

Answer: C

78. Which one of the following sensations has most of its fibers NOT synapsing in the spinal cord:

A. Sensation of pressure of left shoulder.
B. Sensation of crude touch of right upper limb.
C. Sensation of temperature of left big toe.
D. Sensation of pain of left lower limb.
E. Sensation of position of left upper limb.

Answer: E

79. Which of the following statements describes the Gracile tract correctly:

A. Conveys proprioceptive sensation fron the hip joint.
B. Starts at the mid thoracic region.
C. Its sacral fibers are most lateral.
D. Originates from neurons of lamina.
E. Terminates in ventral posterior lateral nucleus of thalamus.

Answer: A

80. Spasticity of the paralyzed muscles in UMN lesions is associated with:

A. Clonus.
B. Remarkable wasting of the muscle.
C. Inhibition of tendon jerks.
D. Fasciculations.
E. None of the mentioned signs.

Answer: A

81. The special visceral efferent column of nuclei:

A. Supplies smooth muscles.
B. Supplies muscles derived from pharyngeal arch.
C. Supplies muscles derived from myotomes.
D. Include the dorsal vagal nucleus.
E. Include the mesencephalic nucleus.

Answer: B

82. The cranial nerve nucleus that supplies muscles of the larynx, is the:

A. Solitary nucleus.
B. Nucleus Ambiguus.
C. Dorsal motor vagal nucleus.
D. Motor facial nucleus.
E. Spinal nucleus of V.

Answer: B

83. Patient having paraplegia with loss of pain sensation in spite of preservation of proprioception in both lower limbs most likely has:

A. Completer transection of the spinal cord.
B. Anterior spinal artery occlusion.
C. Hemisection of the spinal cord.
D. Tabes dorsalis.
E. Poliomyelitis.

Answer: B

84. Which of the following nucleus found only in cervical:

A. Medial group of anterior horn cell.
B. Latral group of anterior horn cell.
C. Central group of anterior horn cell

Answer: C

85. Hemisection of spinal cord which is correct:

A. Contolatral paralysis.
B. Controlatral loss of propioseption.
C. Controlatral loss of pain.

Answer: C

Physiology

Dr. Shaima'a Nasr

86. Concerning transmission of pain signal's into the cns which of the following is true:

A. The fast pain fibers are classified as type C fibers.
B. Type a delta pain fibers transmit acute pain.
C. The fast and slow pain fibers synapse with the same spinal neurons.
D. The paleospinothalamic tract conducts fast pain signals to the thalamus.
E. The neospinothalamic tract conduct slow pain signal's to the thalamus.

Answer: B

87. The following is correct regarding the crossed extensor reflex:

A. Exaggerated in lower motor neuron.
B. Is monosynaptic spinal reflex.
C. Supports the body and depends on the divergence of signals.
D. Does not involve reciprocal inhibition.
E. Provides a typical example of a deep reflex.

Answer: C

88. During tendon jerk, the following receptor is stimulated:

A. Extrafusal muscle fiber.
B. Static nuclear bag fiber.
C. Nuclear chain fiber.
D. Dynamic nuclear bag fiber.
E. Slowly adapting receptors.

Answer: D

89. Activity of RAS produces:

A. Sleep.
B. Awakening.
C. Drowsiness.
D. Coma.
E. Improved mood.

Answer: B

90. Regarding the role of the basal ganglia in motor control:

A. Disorders of the basal ganglia produce a marked loss of both sensation and motor control.
B. The globus pallidus projects directly to the cerebral cortex.
C. Acetylcholine 1s the predominant neurotransmitter of the substantia Nigra.
D. Basal ganglia don't participate in planning of motor activity.
E. Parkinsonism is caused by neuronal degeneration within the substantia nigra.

Answer: E

91. Which one of the following sensations has most of its fibers Not synapsing in spinal cord:

A. Sensation of crude touch of left shoulder.
B. Sensation of pain of left lower limb.
C. Sensation of temperature of left big toe.
D. Sensation of position of left upper limb.

Answer: D

92. The most important functional parameter of pain receptors is:

A. Exhibit little or no adaptation.
B. Not affected by muscle tension.
C. Signal only flexion at joint capsules.
D. Can voluntary be inhibited.

Answer: A

93. When muscle stretch will activate:

A. 1a.
B. 1b.
C. ii.

Answer: A

Pathology

Dr. Mohammad Al-Wiswsy

94. Regarding the pathological features of diseases, ONE of the following matches is False:

A. Alzheimer disease - Neuritic plaques (amyloid core surrounded by dystrophic neurites) and neurofibrillary tangles.
B. Frontotemporal dementia — Atrophy of the frontal and temporal lobes, some subgroups characterized by specific inclusions consisting of accumulations of Lewy bodies.
C. Parkinsonism - Syndrome of motor disturbances seen caused by damage to dopaminergic neurons of the substantia nigra or to their projection to the striatum.
D. Amyotrophic lateral sclerosis - Reduction in the number of anterior horn cell throughout the length of the spinal cord with loss anterior root myelinated fibers and reactive gliosis.
E. Red neuron — Shrinkage nerve cell body with intense eosinophilia of the cytoplasm, pyknosis and angulation of the nucleus, disappearance of the nucleolus and loss of Nissl substance.

Answer: B

95. ONE of the following statements is CORRECT:

A. Progression of cingulate herniation is often accompanied by Duret hemorrhage.
B. Tonsillar herniation is displacement of the cerebral peduncles through the foramen magnum.
C. Transtentorial herniation is compression and herniation of the medial aspect of the parietal lobe against the free margin of the tentorium..
D. Transtentorial herniation results in compression of the posterior cerebral artery while subfalcine herniation results in compression of the anterior cerebral artery.

Answer: D

96. ONE of the following statements is CORRECT:

A. Foramen of Magendie obstruction causes hydrocephalus ex vacuo.
B. Tonsillar herniation is displacement of the cerebral peduncles through the foramen magnum.
C. Transtentorial herniation is compression and herniation of the medial aspect of the parietal lobe against the free margin of the tentorium.
D. Subfalcine herniation occurs when unilateral expansion of a cerebral hemisphere displaces the frontal pole under the (lower free) edge of falx cerebri.
E. Bleeding from intracerebral arteriovenous malformation causes sudden severe excruciating headache, neck stiffness followed by rapid loss of consciousness.

Answer: D

97. True about transtentorial:

A. 3rd cranial .. blown pupil.
B. Dura hemorrhaged.

Answer: A

Pharmacology

Dr. Sherif Shaltout

98. A 20-year-old man was accompanied to the clinic by his mother who stated that her son had been exhibiting most unusual behavior over the last few weeks. He was euphoric most of the day, stayed up later and later at night, and frequently awakened his parents singing at the top of his lungs. He quit his job and insists he doesn't need one since he has a plan for big money. Upon arriving at the clinic he has trouble sitting still or listening and becomes increasingly irritable throughout the examination. He has a history of alcohol misuse. What first line pharmacotherapy was likely tried:

A. Alprazolam.
B. Imipramine.
C. Chlorpromazine.
D. Valproate.
E. Phenobarbital.

Answer: C

99. Morphine benefit in acute pulmonary edema because all except:

A. Bronchodilation.
B. Decrease preload.
C. Decrease afterload.
D. Decrease respiratory distress.
E. Shift blood from pulmonary to systemic circulation.

Answer: A

100. Mechanism of action of morphine:

A. Open Ca channel in presynaptic.
B. Open Cl channel in presynaptic.
C. Open Na channel in postsynaptic.
D. Open K channel in postsynaptic.

Answer: D

101. Effect of Codeine + paracetamol:

A. Paracetamol sntagonise constipation effect of codeine.
B. Increase analgesic effect.
C. No tolerance and addiction.

Answer: B

102. Donepezil side effect:

A. Nausa, vomiting, diarrhea.
B. Dry skin, mouth and urinary retention.
C. Hypertension hyperthermia convulsions.

Answer: A

103.Which of the following drug is make cheese reaction:

A. Tranylcypromine.
B. Selegiline.
C. Donepezil.

Answer: A

104.Side effect that persist after discontenuatoin of therapy:

A. Travide dyskinesia.
B. Dystonia.
C. Akathesia.

Answer: A

105.Which side effect can decrease when take carbidopa with l dopa:

A. Cardiac arrhythmia.
B. Dyskinesia.
C. Hallucination.

Answer: A

106.Case (children with manic attack should take):

A. Li + risperidone.
B. Li + paroxetine.

Answer: A

107.Patient suffer from diarrhea after take paroxetine why:

Answer: Increase serotonin activity.

Biochemistry

Dr. Wala'a Al-Bayomie

108. A 12-year-old boy develops convulsions. After running an Electroencephalogram (EEG), a neurologist determines that the child has epilepsy. He is started on benzodiazepine which promotes the activity of GABA. GABA is derived from Glutamate by which of the following reactions:

A. Deamination.
B. Transamination.
C. Decarboxylation.
D. Dehvdrogenation.
E. Hvdroxylation.

Answer: C

109. Histamine degradation enzyme:

A. Diamine oxidase.
B. Histamine - N-methyltransferase.

Answer: B

Hope's Exams

Anatomy

Dr. Ashraf Ramzy

110.Anterior spinal artery supplies all the following EXCEPT:

A. UMN of pyramidal tract.
B. 1st order neurone of conscious proprioception.
C. The tract that carries pain & temperature.
D. Cells of origin of autonomic fibers in spinal cord.
E. The tract that carries touch & pressure.

Answer: B

111.As regards the spinal cord nuclei, choose the INCORRECT matching:

A. Nucleus dorsalis - relays unconscious proprioception.
B. Central group of ventral horn nuclei - is present in thoracic & upper 3 lumbar segments.
C. Intermediate nucleus - is present in thoracic, lumbar & sacral segments.
D. Lateral group of ventral horn nuclei - is present in cervical & lumbosacral segments.
E. Main sensory nucleus - relays exteroception.

Answer: B And C

112.LMNL shows all the following EXCEPT:

A. Loss of all types of movements.
B. Loss of tendon jerks.
C. Loss of superficial reflexes.
D. Loss of plantar response.
E. Disuse atrophy.
F. Non of the above

Answer: F

113.Choose the INCORRECT matching:

A. Spino-tectal tract - is responsible for spino-visual reflex.
B. Spinal lemmiscus - carries crude touch & pressure.
C. Anterior spino-cerebellar tract- carries proprioception from lower limbs.
D. Axon of cuneate nucleus - Carries conscious proprioception from thumb.
E. VPMN of thalamus- receives termination of spinal lemniscus.

Answer: E

114. How many segments of the spinal cord lie in the vertebral column above the level of lower border of 9th thoracic vertebra(T9):

A. 14 segments.
B. 16 segments.
C. 18 segments.
D. 19 segments.
E. 20 segments.

Answer: E

115. The right medial lemniscus carries sensations of:

A. Pain from the left side of the body.
B. Conscious proprioception from the left side of the body.
C. Muscle tone from right side of the body.
D. Crude touch from the left side of the body.
E. Fine touch from right side of body.

Answer: B

116. As regards the attachment of the cranial nerves to the brain stem, choose the INCORRECT matching:

A. Hypoglossal nerve - sulcus between olive & ICP.
B. Trigeminal nerve - Junction of MCP & basis pontis.
C. Abducent nerve - above pyramid.
D. Facial nerve - cerebello-pontine angle.
E. Oculomotor nerve - medial side of basis pedunculi.

Answer: A

117. General visceral efferent (GVE) column includes all the following nuclei EXCEPT:

A. Dorsal vagal nucleus.
B. Edinger Westphal nucleus.
C. Nucleus ambiguus.
D. Lacrimatory nucleus.
E. Inferior salivatory nucleus.

Answer: C

118. Choose the CORRECT matching:

A. Dorsal vagal nucleus - palatine muscles.
B. Edinger Westphal nucleus - Lateral rectus muscle.
C. Nucleus ambiguous - muscles of bronchial tree.
D. Mesencephalic nucleus - proprioception of head.
E. Inferior salivatory nucleus - submandibular gland.

Answer: D

119.As regards the internal structure of the midbrain, choose the CORRECT matching:

A. Parieto-pontine fibers - medial 1/5 of basis peduncull.
B. Sustantia nigra - between tegmentum & tectum.
C. Ventral tegmental Decussation - tegmentum at level of inferior colliculus.
D. Cortico-spinal tract - lateral 1/5 of basis pedunculi.
E. Cortico-nuclear tract - middle 3/5 of basis pedunculi,

Answer: E

120.Patient having paraplegia with loss of pain sensation in spite of preservation of proprioception in both lower limbs most likely has:

A. Completer transection of the spinal cord.
B. Anterior spinal artery occlusion.
C. Hemisection of the spinal cord.
D. Tabes dorsalis.
E. Poliomyelitis.

Answer: B

121.Nucleus ambiguus supplies all the following muscles EXCEPT:

A. Pharyngeal constrictors.
B. Palatopharyngeus.
C. Tensor palati.
D. Levator palati.
E. Laryngeal muscles.

Answer: D

122.A lesion in the right gracile tract leads to loss of:

A. Sense of position of left big toe.
B. Vibration sense of right tibia.
C. Sense of movement of right elbow joint.
D. Feeling of a pencil put in the right hand.
E. Site of touch on the right iliac fossa.

Answer: B

123.Choose the CORRECT matching:

A. Wernike's area - expressive aphasia.
B. Supramarginal area - Stereognosis.
C. Premotor area - area 4.
D. Insula - taste.
E. Auditory area - complete loss of hearing.

Answer: D

124.Lateral medullary syndrome includes the following EXCEPT:

A. Ipsilateral cerebellar ataxia.
B. Contralateral paralysis of palate, pharynx & larynx.
C. Ipsilateral pain & temperature loss from face.
D. Ipsilateral Horner syndrome.
E. Ipsilateral loss of taste of posterior 1/3 of tongue.

Answer: B

125.As regards the thalamic parts and its relations, choose the CORRECT matching:

A. Inferior surface - pulvinar.
B. Lateral surface - lentiform nucleus.
C. Posterior end - choroid plexus.
D. Medial surface - subthalamus.
E. Superior surface - 3rd ventricle.

Answer: B

126.As regards corpus callosum, choose the INCORRECT statement:

A. It is related inferiorly to septum pellucidum.
B. Fibers of genu forms forceps minor.
C. Fibers of rostrum intersect with corona radiata.
D. It is related superiorly to falx cerebri.
E. Fibers of splenium forms forceps major.

Answer: C

127.As regards the association fibers, choose the CORRECT matching:

A. Uncinate bundle - connects frontal lobe & occipital lobe.
B. Superior longitudinal bundle - connects Werniche's area & Broca's area.
C. Fronto-occipital bundle - Connects cingulate gyrus & parahippocampal gyrus.
D. Cingulum - runs deep to limbic lobe.
E. Inferior longitudinal bundle - is separated from superior longitudinal bundle by corona radiata.

Answer: D

128.As regards the lateral ventricle, choose the INCORRECT statement:

A. It is connected with 3rd ventricle through interventricular foramen of Monroo.
B. Its inferior horn lies within temporal lobe.
C. Roof of posterior horn is formed by tapetum of corpus callosum.
D. Lateral to posterior horn lies auditory radiation.
E. The medial wall of its posterior wall shows 2 elevations.

Answer: D

129.Posterior limb of internal capsule contains all the following EXCEPT:

A. Corticospinal fibers.
B. Corticonuclear fibers.
C. Corticorubral fibers.
D. Sensory radiation.
E. Frontopontine fibers.

Answer: B

130.Basilar artery gives all the following branches EXCEPT:

A. Pontine branches.
B. Labyrinthine artery.
C. Posterior inferior cerebellar artery.
D. Superior cerebellar artery.
E. Posterior cerebral artery.

Answer: C

131.As regards the subarachnoid cisterns, choose the CORRECT matching:

A. Cisterna ambiens - contains great cerebral vein.
B. Cisterna pontis - lies below cerebellum.
C. Cistern of lateral fossa - contains circle of Willis.
D. Interpeduncular cistern - contains basilar artery.
E. Cisterna magna - contains middle cerebral artery.

Answer: A

132.As regards dural venous sinuses, choose the CORRECT matching:

A. Superior petrosal sinus - considered as an emissary vein.
B. Superior petrosal sinus - runs in free margin of tentorium cerebelli.
C. Straight sinus - lies at line of attachment of falx cerebri & tentorrum cerebelli.
D. Sigmoid sinus - begins as continuation of internal jugular vein.
E. Transverse sinus - begins as continuation of sigmoid sinus.

Answer: C

Physiology

Dr. Shaima'a Nasr

133.On overstretching normal skeletal muscle, it relaxes due to:

A. Decreased discharge from the muscle spindles afferent.
B. Decreased discharge in the gamma efferent neurons.
C. Increased discharge from the antagonistic muscle.
D. Increased activity of the alpha motor neurons.
E. Increased activity of the Golgi tendon organ.

Answer: E

134.Spasticity of the paralyzed muscles in UMN lesions is associated with:

A. Clonus.
B. Remarkable wasting of the muscle.
C. Inhibition of tendon jerks.
D. Fasciculations.
E. None of the mentioned sign.s

Answer: A

135.The neurons that release serotonin as chemical transmitter along analgesia system are located in:

A. Periaqueductal gray area.
B. Interneurons of the spinal cord.
C. Periventricular area.
D. Raphe magnus nucleus.
E. Synapse between first and second order neuron in neospinothalmic pathway.

Answer: D

136.In spinal reflexes the following is true:

A. A monosynaptic reflex arc involves one or more interneurons.
B. The knee jerk reflex is an example of a static stretch reflex.
C. Interneurons are the final common path for all reflexes.
D. Withdrawal reflexes are monosynaptic reflexes.
E. They represent stereotyped response to certain stimulus through reflex arc.

Answer: E

137.During tendon jerk, the following receptor is stimulated:

A. Extrafusal muscle fiber.
B. Static nuclear bag fiber.
C. Nuclear chain fiber.
D. Dynamic nuclear bag fiber.
E. Slowly adapting receptors.

Answer: D

138.In Primary hyperalgesia the following is not true:

A. Is due to sensitization of local nociceptors by inflammatory mediators.
B. Seen in the area of sun burn.
C. Is due to facilitation of sensory transmission.
D. Occurs in injured damaged areas of the skin.
E. Is exaggerated pain response to non-painful stimuli.

Answer: C

139.Inhibition of pain signals by tactile stimulation of a skin surface involves:

A. Type A alpha fibers in peripheral nerves.
B. Type A beta fibers in peripheral nerves.
C. Type A delta fibers in peripheral nerves.
D. Type C fibers in peripheral nerves.
E. Type B fibers in peripheral nerves.

Answer: B

140.Activity of RAS produces:

A. Sleep.
B. Awakening.
C. Drowsiness.
D. Coma.
E. Improved mood.

Answer: B

141.When EPSP and IPSP occur simultaneously the postsynaptic membrane:

A. Becomes depolarized.
B. Becomes hyperpolarized.
C. Initiates an action potential.
D. Shows potential changes that depend upon the summation of their effects.
E. Iinitiates always central excitatory state.

Answer: D

142.Receptors detect increased stimulus intensity by:

A. Lowering the threshold for receptor stimulation.
B. Generating receptor potentials having higher magnitudes.
C. Generating nerve impulses that are transmitted along sensory fibers at higher velocities.
D. Enhancing the central effects of sensory impulses.
E. Inhibiting the central effect of the opposite sensation.

Answer: B

143.In thalamic syndrome there is:

A. Sensory ataxia.
B. Motor ataxia.
C. Cerebellar ataxia.
D. Mixed ataxia.
E. Othere is no ataxia.

Answer: D

144.Clonus:

A. Is a sign of decreased supraspinal facilitation.
B. Initiated by briefly stretching the tendon of the muscle.
C. Is manifested as oscillating mechanical vibrations following tendon jerks.
D. Involves alternations of stretch and inverse stretch reflex.
E. Associates hyporeflexia on examining the tendon jerks.

Answer: D

145.Decreased muscle tone occurs in:

A. Activation of fibers.
B. Anxiety.
C. LMNL.
D. Parkinson's disease.
E. Lesion of the internal capsule.

Answer: C

146.Central connections of the stretch reflex include:

A. Directly inhibiting motor neurons of the antagonistic muscles.
B. Directly inhibiting the motor neurons of the antagonistic muscles.
C. Inhibiting the transmitter release from the central terminals of afferents from the spindles of the antagonistic muscles.
D. Inhibitory interneurons to inhibit motor neurons of the antagonistic muscles.
E. Excitatory synapse to the extrafusal muscle fibers of the antagonistic muscle.

Answer: D

147.Afferents from basal ganglia project to:

A. Anterior nucleus of thalamus.
B. Dorsomedial nucleus of thalamus.
C. Ventral anterior nucleus of thalamus.
D. Ventral posterior nucleus of thalamus.
E. Pulvinar.

Answer: C

148.The most important functional parameter of pain receptors is:

A. Exhibit no adaptation.
B. Not affected by muscle tension.
C. Signal only flexion at joint capsules.
D. Can voluntary be inhibited.
E. Connected to one type of afferent fibers.

Answer: A

149.A patient complaining of loss of pain and temperature sensation in the left leg is most likely to have a lesion of the:

A. Left corticospinal tract.
B. Left anterior spinothalamic tract.
C. Left lateral spinothalamic tract.
D. Right anterior spinothalamic tract.
E. Right lateral spinothalamic tract

Answer: E

Pathology

Dr. Mohammad Al-Wiswsy

150.Regarding the pathological features of diseases, ONE of the following matches is False:

A. Alzheimer disease - Neuritic plaques (amyloid core surrounded by dystrophic neurites) and neurofibrillary tangles.
B. Frontotemporal dementia — Atrophy of the frontal and temporal lobes, some subgroups characterized by specific inclusions consisting of accumulations of Lewy bodies.
C. Parkinsonism - Syndrome of motor disturbances seen caused by damage to dopaminergic neurons of the substantia nigra or to their projection to the striatum.
D. Amyotrophic lateral sclerosis - Reduction in the number of anterior horn cell throughout the length of the spinal cord with loss anterior root myelinated fibers and reactive gliosis.
E. Red neuron — Shrinkage nerve cell body with intense eosinophilia of the cytoplasm, pyknosis and angulation of the nucleus, disappearance of the nucleolus and loss of Nissl substance.

Answer: B

151.ONE of the following statements is False:

A. Neurofibrillary tangles - Bundles of paired helical filaments visible as basophilic fibrillary intracytoplasmic structures of the neurons that displace or encircle the nucleus.
B. Idiopathic Parkinson disease - Progressive Parkinsonism in the absence of a toxic or other known underlying etiology and if they show clinical response to (l-DOPA) treatment.
C. Neuronophagia -Rod cells surrounding portions of dying neurons while rod cells aggregates at sites of tissue injury are termed microglial nodules.
D. Parkinsonism -Clinical syndrome characterized by diminished facial expression, bended posture, slowness of voluntary movement, festinating gait rigidity, and a "pill-rolling" tremor.
E. Dementia -Development of memory impairment and other cognitive deficits, with preservation of a normal level of consciousness.all cases of dementia are caused by neuro-degenerative diseases.

Answer: E

152.ONE of the following statements is CORRECT:

A. Progression of cingulate herniation is often accompanied by Duret hemorrhage.
B. Tonsillar herniation is displacement of the cerebral peduncles through the foramen magnum.
C. Transtentorial herniation is compression and herniation of the medial aspect of the parietal lobe against the free margin of the tentorium.
D. Subfalcine herniation occurs when unilateral expansion of a cerebral hemisphere displaces the frontal pole under the (lower free) edge of falx cerebri.
E. Transtentorial herniation results in compression of the posterior cerebral artery while subfalcine herniation results in compression of the anterior cerebral artery.

Answer: E

153.ONE of the following statements is CORRECT:

A. Foramen of Magendie obstruction causes hydrocephalus ex vacuo.
B. Tonsillar herniation is displacement of the cerebral peduncles through the foramen magnum.
C. Transtentorial herniation is compression and herniation of the medial aspect of the parietal lobe against the free margin of the tentorium.
D. Subfalcine herniation occurs when unilateral expansion of a cerebral hemisphere displaces the frontal pole under the (lower free) edge of falx cerebri.
E. Bleeding from intracerebral arteriovenous malformation causes sudden severe excruciating headache, neck stiffness followed by rapid loss of consciousness.

Answer: D

154.Regarding intracranial hemorrhages, ONE of the following matches is CORRECT:

A. Epidural hemorrhage - Rupture vascular malformation.
B. Intraventricular hemorrhage — Ruptured mycotic aneurysm.
C. Duret hemorrhages - Ruptured cerebral amyloid angiopathy.
D. Subarachnoid hemorrhage - Ruptured atheromatous aneurysm.
E. Chronic subdural hematomas — Rupture of thin-walled blood vessels within the granulation tissue.

Answer: E

155.If a patient survives an attack of cerebral infarction or cerebral haemorrhage, the final end result of both lesions is:

A. Cyst.
B. Plaque.
C. Fibrous Scar.
D. Caseation necrosis.
E. Coagulative necrosis.

Answer: A

156.One of the following statements is False:

A. A decrease of the systolic blood pressure to less than 50mm Hg will result in global cerebral ischemic/hypoxic injury.
B. The most frequent embolic infarction in the brain occurs in the territory of distribution of the anterior cerebral artery.
C. It Opened depressed fracture of the skull can cause focal contusion, brain tissue laceration, provides rote of infection and a focus of post-traumatic epilepsy.
D. Subfalcine hermation usually results in compression of the anterior cerebral artery while transtentorial herniation usually results in compression of the posterior cerebral artery.
E. Concussion is reversible loss of consciousness from head injury characterize by transient neurologic dysfunction including loss of consciousness, temporary respiratory arrest and loss of reflexes.

Answer: B

157.All the following are effects of systemic hypertension on the brain EXCEPT:

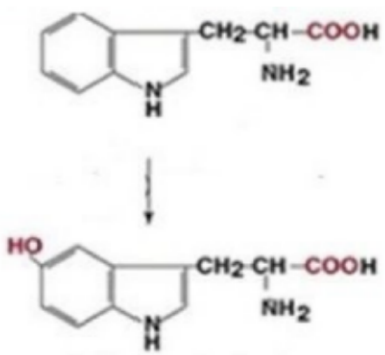
A. Lacunar infarcts.
B. Slit hemorrhages.
C. Duret hemorrhages.
D. Charcot-Bouchard microaneurysms.
E. Acute hypertensive encephalopathy.

Answer: C

Biochemistry

Dr. Wala'a Al-Bayomie

158.The enzyme that catalyzes the following reaction is ..... , which is used in the synthesis of ..... :



A. Tryptophan hydroxylase, Serotonin.
B. Tryptophan decarboxylase, Serotonin.
C. Tyrosine hydroxylase, Serotonin .
D. Tryptophan hydroxylase, Dopamine .
E. Phenylalanine hydroxylase, Serotonin.

Answer: A

159.A 12-year-old boy develops convulsions. After running an Electroencephalogram (EEG), a neurologist determines that the child has epilepsy. He is started on benzodiazepine which promotes the activity of GABA. GABA is derived from Glutamate by which of the following reactions:

A. Transamination.
B. Decarboxylation.
C. Deamination.
D. Hydroxylation.
E. Dehydrogenation.

Answer: B

160.Which of the followings results mainly in an Excitatory Postsynaptic Potential (EPSP):

A. Binding of glutamate to AMPA receptors.
B. Binding of clonazepam to GABAA receptors.
C. Binding of baclofen to GABAB receptors.
D. Binding of enkephalin to & (delta) opioid receptors.
E. Binding of atropine to acetylcholine muscarinic receptors.

Answer: A

Pharmacology

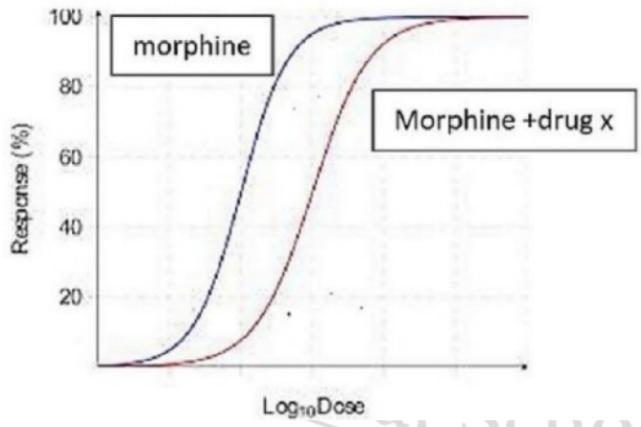
Dr. Tareq Saleh

161. year-old male patient has been diagnosed with major depressive disorder. The patient was started on the antidepressant drug A. Drug A selectively inhibits SERT. Drug A is likely to worsen the patiemt's insomnia. Drug A has a half-life of less than a day. Drug A can be used for the treatment of Obsessive-Compulsive Disorder in children. Which of the following drugs is likely to be drug A:

A. Fluoxetine.
B. Sertraline.
C. Venlafaxine.
D. Bupropion.
E. Murtazapine.

Answer: A

162. You can measure the efficacy of morphine in an experimental system by measuring the activation of Gi subunit of opioid GPCRs. The blue curve represents the dose-effect curve of morphine alone in CHO cells. When drug x (10 microgram/ml) was combined with morphine, the dose-effect curve of morphine changed to the red curve. Drug x is likely to be:



A. Codeine.
B. Naltrexone.
C. Methadone.
D. Duloxetine.
E. Enkephalin.

Answer: B

163.A 77-year-old patient with Parkinson's disease has been treated with levodopa+carbidopa for three years which led to successful control of his symptoms. Recently, the patient started experiencing periods of worsening dyskinesia and tremors that alternate with periods of improved motor functions. The patient has been compliant to his medication. As his neurologist, which of the following strategies is unlikely to alleviate the fluctuation in motor function in this patient:

A. Addition of tolcapone to the levodopa+carbidopa combination.
B. Addition of rasagiline to levodopa+carbidopa combination.
C. Shortening the intervals between oral doses of levodopa.
D. Addition of benztropine to levodopat+carbidopa combination.
E. Utilization of slow-release forms of levodopa+carbidopa.

Answer: B

164.Pharmacological opioid tolerance is characterized by a reduced responsiveness to an opioid agonist and usually manifests as the need to use increasingdoses of the drug. However, tolerance does not develop to all opioid-induced actions. Which of the following statements correctly reflects opioid tolerance:

A. Tolerance to the analgesic effect develops faster than to the sedative effect.
B. Lack of tolerance to the meiotic effect is helpful for the diagnosis of opioid overdose.
C. Quick tolerance to the respiratory depressive action increases death risk upon dose increase.
D. Lack of tolerance to the constipating effect allows for dose increase with minimal adverse effects.
E. If tolerance develops against oxymorphone it is unlikely to develop against hydrocodone.

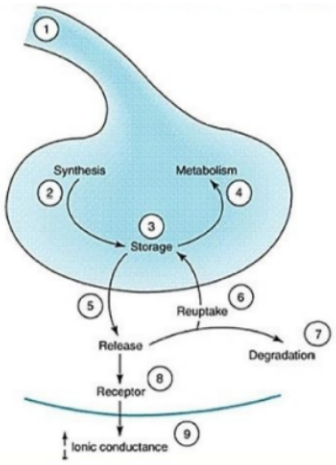
Answer: A

165.After you graduated from medical school, you wanted to gain research experience to improve your resume. You worked as research assistant in a research center interested in finding drugs for schizophrenia. Your boss asked you to bring ideas for novel medications to be used in treating such condition. Which of the following would be the BEST strategy:

A. Identifying a drug that activates presynaptic serotonin receptors.
B. Identifying a drug that increases levels of dopamine is sabstantia nigra.
C. Identifving a drug that inhibits D2, SERT.
D. Identifying a drug that decreases the activity of tryptophan hydroxylase.
E. Identifying a drug that decreases the activity of monoamine-oxidase B.

Answer: C

166.Several components of the neurotransmitter cycle represent targets for many neuroactive drugs used for the treatment of neurological or mental health disorders Using the numbers provided in the diagram indicating each step in the cvcle, identify the correct drug-target match from the following:



A. Rasagiline- 3.
B. Buprenorphine- 8.
C. Phenelzine - 7.
D. Escitalopram-5.
E. Galantamine -.4

Answer: B

167.Which of the following statements describes a scenario where morphine can be used as the optimal analgesic:

A. A 65-year-old medically-free female patient with 9/10 left leg radiating burning pain.
B. A 22-year-old multigravida female to reduce labor-associated pain.
C. A 12-year-old asthmatic boy following a major knee joint surgery.
D. A 33-year-old male patient with severe head trauma from a car accident.
E. A 55-year-old male smoker patient with late-stage colorectal cancer.

Answer: E

168.Carb I dopa is used to inhibit peripheral decarboxylation of levodopa. However, it does not affect levodopa metabolism in the brain, otherwise, levodopa will not be effective for the treatment of Parks in son's disease. This is because:

A. Levodopa is metabolized by a different enzyme In the CNS.
B. Carbidopa is poorly absorbed from the gut.
C. Carbidopa does not cross the blood brain barrier.
D. Levodopa is highly protein bound in the cerebral circulation.
E. Carbidopa is rapidly eliminated by the kidneys.

Answer: A

169. A patient was diagnosed with severe case of psychosis. Clozapine was prescribed. The patient was asked to visit the hospital regularly for blood sampling and tests. This is mainly to decrease the risk of:

A. Serotonin syndrome.
B. Diabetes.
C. Agranulocytosis.
D. Tardive dyskinesia.
E. Nausea and vomiting.

Answer: C

170. A 25-year-old teacher has a long history of depressive symptoms accompanied by body aches and pain secondary to a car accident Which of the foilowing drugs might be useful in this patient:

A. Fluoxetine.
B. Sertraline.
C. Phenelzine.
D. Dudoxetine.
E. Vrlazodone.

Answer: D

171. You are the leading physician-scientist of the research and development team in a pharmaceutical company. Your team is working on the development of novel therapies to treat Alzheimer's disease. Your goal is to develop drugs that will reduce the neurodegenerative processes of Alzheimer's. Which of the following mechanisms will be included in your proposal:

A. Designing more efficacious NMDA receptor antagonists.
B. Designing more selective cholinesterase inhibitors.
C. Designing long-release transdermal levodopa preparations.
D. Designing drugs that interfere with amyloid-beta deposition.
E. Designing drugs that interfere with ongoing destruction of substantia nigra.

Answer: A

Previous Batches' Exams

Anatomy

Dr. Ashraf ramzi

172.Hemisection of the spinal cord would result in the following below the level of the lesion:

A. Ipsilateral motor paralysis of lower motor neuron type.
B. Ipsilateral motor paralysis of upper motor neuron type.
C. Contralateral motor paralysis of upper motor neuron type.
D. Ipsilateral loss of crude touch.
E. Ipsilateral loss of pain & temperature.

Answer: B

173.Choose the INCORRECT matching:

A. Area 17 - homonymous hemianopia.
B. Broca's area - motor aphasia.
C. Prefrontal area - Loss of conjugate eye deviation.
D. Area 6 - return of grasp reflex.
E. Superior parietal lobule - astereognosis

Answer: C

174.Lateral medullary syndrome includes the following EXCEPT:

A. Ipsilateral Horner syndrome.
B. Ipsilateral paralysis of palate, pharynx & larynx.
C. Contralateral pain & temperature loss from face.
D. Ipsilateral loss of taste of posterior 1/3 of tongue.
E. Ipsilateral cerebellar ataxia.

Answer: C

175.As regards the boundaries of the 3rd ventricle, choose the INCORRECT matching:

A. Roof - choroid plexus.
B. Medial wall hypothalamus.
C. Posterior wall - pineal body.
D. Anterior wall - lamina terminalis.
E. Floor - optic chiasma.

Answer: B

176.Middle cerebral artery supplies all the following EXCEPT:

A. Broca's area.
B. Temporal pole.
C. Posterior part of lentiform nucleus.
D. Upper ½ of anterior limb of internal capsule.
E. Superior frontal gyrus

Answer: E

177.Fibers of fornix ends at:

A. Mammillary body.
B. Habenular nuclei.
C. Septal areas.
D. Amygdaloid nucleus.
E. Hippocampus

Answer: A

178.As regards the contents of the different parts of the internal capsule, choose the INCORRECT matching:

A. Posterior limb - superior thalamic radiation.
B. Retrolentiform part - parietopontine fibers.
C. Anterior limb - frontopontine fibers.
D. Genu - corticospinal fibers.
E. Sublentiform part - auditory radiation

Answer: D

179.The following arteries share in the arterial supply of internal capsule EXCEPT:

A. Posterior communicating artery.
B. Anterior choroidal artery.
C. Middle cerebral artery.
D. Anterior cerebral artery.
E. Posterior choroidal artery.

Answer: E

180.Anterior spinal artery supplies the following structures EXCEPT:

A. Medial lemniscus.
B. Pyramid.
C. Nucleus ambiguus.
D. Medial longitudinal bundle.
E. Hypoglossal nucleus

Answer: C

181. Which of the following cranial nerve nuclei IS NOT connected to the medial longitudinal bundle:

A. Cochlear.
B. Facial.
C. Oculomotor.
D. Abducent.
E. Trochlear.

Answer: B

182. Definition of nucleus:

Answer: Group of cell bodies in CNS, Cells have the same function.

183. In UMNL:

Answer: Plantar reflex is modified.

184. Part of the limbic system:

Answer: Hippocampus.

185. A positive Babinski sign reflects:

Answer: UMNL.

Dr. Saad Al Sabti

186. All of the following is correct regarding pia mater except:

A. It's a vascular membrane.
B. Thickened on either side to form ligamentum denticulate.
C. Covers the gyri and descend into the deepest sulci.
D. Forms one of the epidural space boundaries.
E. Via attach to arachnoid by tubercle.

Answer: D

187. One of the following statements concerning the basal nuclei is correct:

A. The amygdaloid nucleus is connected to the caudate nucleus.
B. The lentiform nucleus is completely divides by the internal capsule into pallidus and the putamen.
C. The claustrum does not form part of the basal nucleus.
D. The corpus striatum lies medial to the thalamus.
E. The external capsule lies between the caudate and the lentiform nucleus.

Answer: A

188.The area of the brain that plays a role in consciousness the:

A. Cerebellum.
B. Thalamus.
C. RAS (reticular activation system).
D. Pineal gland.
E. Limbic system.

Answer: C

189.The basal nuclei their effects on motor activity through the:

A. Rubrospinal tract.
B. Vestiulospinal tract.
C. Reticulospinal tract.
D. Corticospinal tract.
E. All of the above.

Answer: D

190.The spinal lemniscus and the medial lemniscus terminate in the:

A. Ventral posteromedial (VPM) thalamic nucleus.
B. Ventral posterolateral (VPL) thalamic nucleus.
C. Lateral dorsal nucleus.
D. Ventra lateral thalamic nucleus.
E. Anterior thalamic nucleus.

Answer: B

191.One of the following statements concerning the arteries supplying the brain and spinal cord is correct:

A. The ophthalmic artery is a branch of the middle cerebral artery.
B. The pontine arteries are branches of the internal carotid artery.
C. The posterior communication artery is a branch of the middle cerebral artery.
D. The posterior spinal artery arises from the vertebral artery.
E. The posterior inferior cerebrallar artery is a branch of the basilar artery.

Answer: D

192.Concerning the ventral surface of the medulla oblongata, the two swelling of the ventral median fissure is made by the:

A. Corticospinal tract.
B. Inferior olive.
C. Gracile nucleus.
D. Cuneate nucleus.
E. Hypoglossal nucleus.

Answer: A

193.All the following statements concerning the spinal cord are correct EXCEPT:

A. The spinal cord has a cervical enlargement for the brachial plexus.
B. It has 34 pairs of spinal nerves.
C. In the adult the spinal cord usually ends at the lower border of the first lumbar vertebrae.
D. The ligamentum dentuculatum anchors the spinal cord to the dura mater.
E. The central canal inside it communicates above with the fourth ventricle.

Answer: B

194.An infant was diagnosed as having hydrocephalus. It was determined that there is blockage in the ventricular system of the baby's brain between the 3rd and the 4th ventricles. The blockage therefore must involve:

A. Central canal.
B. Cerebral aqueduct.
C. Foramen of luschka (lateral foramen).
D. Foramen of Magendie (median foramen).
E. Interventricular foramen.

Answer: B

195.The subarachnoid space lies directly between the:

A. Arachnoids matter and cerebellum.
B. Arachnoids matter and cerebrum.
C. Skull and arachnoids matter.
D. Arachnoids matter and dura mater.
E. Arachnoids matter and pia mater.

Answer: E

196.The root of the fourth ventricle is formed by the:

A. Corpus callosum.
B. Thalamus.
C. Cerebellum.
D. Tectum.
E. None of the above.

Answer: C

197.The sympathetic lateral horn of the spinal cord is located:

A. In all spinal segments.
B. Between T1 andL2 spinal segments.
C. Between C8 and L4.
D. In S2, 3 and 4 spinal segments.
E. Between T1 and T112 spinal segments.

Answer: B

198.One of the following tracts passes through (from part of) the internal capsule:

A. Corticospinal tract.
B. Spinothalamic tract.
C. Rubrospinal tract.
D. Vestiulospinal tract.
E. Reticulospinal tract.

Answer: A

199.One of the following statements concerning the arteries supplying the brain and spinal cord is correct:

A. The opthalmic artery is a branch of the middle cerebral artery.
B. The pontine arteries are branches of the internal carotid artery.
C. The posterior communicating artery is a branch of middle cerebral artery.
D. The posterior spinal artery arises from the vertebral artery .
E. The posterior inferior cerebellar artery is a branch of the basilar artery.

Answer: D

200.The following statements concerning subarachnoid space are correct , except:

A. The space is the interval between the arachnoid matter and the via matter.
B. The space contains CSF and cerebral arteries , but not cerebral veins.
C. In certain situations the space is expanded to form cisterns .
D. The 4th ventricle drains into it through three foramina .
E. The space surrounds the cranial and spinal nerves to the point where they leave the skull and the vertebral canal.

Answer: B

201.The Spinal lemniscus and the medial lemniscus terminate in:

A. Ventral posteromedial [VPM] thalamic nucleus.
B. Ventral posterolateral [VPL] thalamic nucleus.
C. Lateral dorsal nucleus.
D. Ventral lateral thalamic nucleus.
E. Anterior thalamic nucleus.

Answer: B

202.The fourth lumbar spinal ligament ' L4 ' has :

A. Substantia gelatinosa.
B. Nucleus dorsalis of clarck.
C. Sympathetic horn.
D. Parasympathetic horn.
E. Cuneate tract.

Answer: A

203.The cranial nerve that doesn't arise in the medulla oblongata is the :

A. Vagus nerve.
B. Hypoglossal nerve.
C. Accessory nerve.
D. Facial nerve.
E. Glossophyrangeal nerve.

Answer: D

204.One of the following statements concerning the midbrain is true:

A. The tectum is the part situated posterior to the cerebral aqueduct.
B. The crus cerebri on each side lied posterior to the substantia nigra.
C. The central gray matter surrounds the red nucleus.
D. The reticular formation is limited to the lower part of midbrain.
E. All of the above.

Answer: A

205.A patient had an injury in the cavernous sinus, you should look out for all of the following nerves except:

A. Occulomotor nerve.
B. Ophthalmic nerve.
C. Facial nerve.
D. Abducent nerve.
E. Trochlear nerve.

Answer: C

206.Functions of hypothalamus, except:

A. Regulate milk.
B. Responsible for thirst.
C. Regulate endocrine.
D. Activate muscle spindle.

Answer: D

207.All of these is a part of the basal gangalia except:

A. Putmen.
B. Caudate nucleus.
C. Corpus striatum.
D. Thalamus.

Answer: D

208.Relatively safest site to collect CSF:

A. L2-L3.
B. L3-L4(It is the true answer although in the slide the answer is L4- L5).
C. L1-L2.
D. None of the above.

Answer: B

209.Which one of these is incorrect regarding Pons:

A. Facial colliculus is formed by facial nucleus winded by the abducent nerve fiber.
B. The vestibular area is suited lateral to sulcus limitans.
C. The floor of the superior part of sulcus limitans contain a group of deeply pigmented nerve cells called substantia ferruginea.
D. The medial eminence is an elongated elevation lateral to median sulcus.

Answer: A

210.Which of these is incorrect regarding Hypothalamus :

A. Is supplied by posterior communicating Artery.
B. Only seen from the ventral surface of the brain.
C. Mammilry body is part of it.
D. It is related to the 4th ventricle.

Answer: D

211.All of these is found in the temporal lobe except:

A. Primary auditory area.
B. Speech Area of wernicke.
C. Auditory association cortex.
D. Primary somatosensory cortex.

Answer: D

212.CSF is produced by:

A. Epindymal cells.
B. Pial cells.
C. Choroid plexus cells.
D. Arachnoid granulations.

Answer: C

213.Which of the following isn't a basal nucleus:

A. Caudate nucleus.
B. Amygdaloid nucleus.
C. Claustrum.
D. Thalamus.

Answer: D

214.Incorrect about cerebellum:

A. It receives conscious stimulation.
B. Lays in posterior cranial fossa.
C. Lies down to the tentorium cerebelii.
D. It forms the roof of the fourth ventricles .

Answer: A

215.Which is a relatively safe site of lumber puncture:

A. L2-L3.
B. L3-L4.
C. S2-S3.
D. S3-S4.

Answer: B

216.Which one of these is correct regarding the site of cell body of nerve:

A. Cell body of the ventral root is in the gray matter and cell body of dorsal in dorsal ganglion.
B. Cell body of dorsal root in the white matter while cell body of ventral in gray matter.
C. Cell body of ventral root in ganglion while cell body of dorasal in gray matter.

Answer: A

217.True about midbrain:

A. Tectum posterior to cerebral aqueduct.
B. Play important role in cognitive control.
C. Caudate nucleus.

Answer: A

218.The lateral horn which gives rise to the sympathetic fibers found along:

A. Between C8 and L4.
B. Between T1 and L2.
C. S2 , S3 , S4.

Answer: B

219.Incorrect about pia mater:

A. Vascular membrane.
B. Ends on filum terminalis.
C. It forms boundary of dura mater.

Answer: C

220.All of the following nuclui origenate in the medulla oblongata except:

A. Hypoglossal.
B. Glossopharyngeal.
C. Facial.

Answer: C

221.Regarding dorsal column pathway which of the following is incorrect:

A. 2 point discrimination.
B. Cell bodies of dorsal horn is in ventral root.

Answer: B

222.Wrong about trochlear nerve:

Answer: Have parasympathetic.

223.Which of the following is incorrect regarding the spinal cord:

Answer: We have 34 pairs of spinal nerves.

224.Correct about blood supply of brain and spinal cord:

Answer: Posterior spinal artery arise from vertebral artery.

225.Parasympathetic nucleus in from the cranial nerves are:

Answer: 3،7،9،10.

226.On the ventral side of medulla, the two swellings to the sides of anterior median fissure are formed by:

Answer: Corticospinal tract.

227.Not correct:

Answer: Facial colliculus produced by fiber of abducent nerve wind around facial nerve.

228.Cerebral aqueduct part of:

Answer: Mesencephalon.

229.Cranial nerve contain presynaptic parasympathetic component:

Answer: 3, 7, 9, 10.

230.The third ventricle is bounded by:

Answer: Thalamus ' from right and left sides '.

231.Which of the following doesn't receive fibers from Hypothalamus:

Answer: Solitarius.

232.All the following nerves pass through hypothalamus , except:

Answer: Olfacatory nerve.

233.Which of the following Cranial nerves have parasympathetic Fibers:

Answer: III , VII , IX , X cranial nerves.

234.Preganglionic sympathetic cell bodies:

Answer: T1-L2.

235.Incorrect about trochlear nerve:

Answer: Supplies the muscle that elevate the eye.

236.Incorrect about the spinal cord:

Answer: There are 34 pairs of spinal nerves.

237.The two anterior bulgings of the medulla oblongata is formed by:

Answer: Corticspinal tract.

238.The third ventricle is separated from the fourth by:

Answer: Cerebral aqueduct.

239.Lesion at T4 on right side result in:

Answer: Loss of 2 points discrimination below T4 on right side.

240.All the following nerves pass through thalamus except:

Answer: Olfactory nerve.

241.CSF is produced by:

Answer: Choroid plexus.

242.Not a basal ganglion:

Answer: Thalamus.

243.Optic tract fibers terminate in:

Answer: Lateral geniculate nucleus.

244.The tract which enables one to recognize objects placed in the hand without the help of vision is:

Answer: Dorsal/spinothalamic tract.

245.Basal ganglia modify motor actions through:

Answer: Corticospinal tract.

246.White mater consist of:

Answer: Nerve axons and neuroglia.

247.Which of the following is incorrect regarding the spinal cord:

Answer: We have 34 pairs of spinal nerves.

248.The spinothalmic tract end in:

Answer: Postcentral gyri.

249.Visual pathway end in:

Answer: The lateral geniculate nucleus.

250.Which of the following is correct:

Answer: The tectum is the part of the midbrain posterior to the cerebral aqueduct.

251.The spinal cord is connected to the brain by:

Answer: Myelencephalon (it gives the medulla oblongata)

252.Which of the following is incorrect:

Answer: The internal capsule divides the lentiform nucleus into putamen and globus palidus.

253.Which of the following is correct:

Answer: The posterior spinal artery is a branch of vertebral artery.

254.The best site to take lumber puncture:

Answer: Between L4-L5.

255.Inhibition of pain signals by tactile stimulation of a skin surface involves:

A. Type B fibers in peripheral nerves.
B. Type A alpha fibers in peripheral nerves.
C. Type C fibers in peripheral nerves.
D. Type A delta fibers in peripheral nerves.
E. Type A beta fibers in peripheral nerves.

Answer: E

256.Receptors detect increased stimulus intensity depends on:

A. Generating nerve impulses that are transmitted along sensory fibers at higher frequencies.
B. Muller's law.
C. Law of projection.
D. Generating receptor potentials having higher magnitudes.
E. Lowering the threshold for receptor stimulation.

Answer: A

257.Secondary hyperalgesia:

A. The threshold to pain perception is decreased.
B. Is due to facilitation of sensory transmission.
C. May be due to sun burn.
D. Occurs in injured damaged areas of the skin.
E. Is due to sensitization of local nociceptors by inflammatory mediators.

Answer: B

258.Fine touch is:

A. Characterized by it emotional affect.
B. Not involved in feeling the texture of touched objects.
C. Transmitted by lateral spinothalamic tract.
D. Detected by rapidly adapting receptors.
E. Transmitted by the ventral spinothalamic tract.

Answer: D

259.The most important functional parameter of pain receptors is:

A. Exhibit little or no adaptation.
B. Signal only flexion at joint capsules.
C. Stimulated only by chemically.
D. Not affected by muscle activity or metabolism.
E. Can voluntary be inhibited.

Answer: A

260.The stimulation of nerve endings in the Golgi tendon organs leads to:

A. Contraction of extrafusal muscle fibers.
B. Increased gamma efferent discharge.
C. Increased activity in nuclear chain fibers.
D. Contraction of intrafusal muscle fibers.
E. Reflex inhibition of motor neurons.

Answer: E

261.When a normal skeletal muscle is suddenly stretched it:

A. Develops a static stretch reflex.
B. Relaxes suddenly.
C. Induces contraction in the antagonistic muscle.
D. Develops clonic contractions.
E. Develops a dynamic stretch reflex.

Answer: E

262.Gamma-motor innervations of muscle spindles produce:

A. Increased sensory discharge from the central region of the spindle fibers.
B. Contraction of the central region of the spindle fibers.
C. Relaxation of the central regions of the spindle fibers.
D. Relaxation of the peripheral regions of the spindle fibers.
E. Decreased sensory discharge from the central region of the spindle fibers.

Answer: A

263.The ability to recognize an unseen familiar object placed in the hand depends on integrity of:

A. Cuneate tract.
B. Lateral spinothalamic tract.
C. Ventral spinothalamic tract.
D. Gracile tract.
E. Cuneo-cerebellar tract.

Answer: A

264.Parkinsonism is associated with:

A. High ability to initiate voluntary movement.
B. Static tremors.
C. Stamping gait.
D. Staccato speech.

Answer: B

265.Transaction (cut) of right half of the spinal cord at the level of T4is associated With:

A. Loss of body temperature sensation of the right side of the body.
B. Loss of the body temperature sensation from the left side of the body.
C. Loss of information from muscle spindles of the left side of the body.
D. Loss of information from Golgi tendons receptors from the left side.
E. Atrophy of muscles in the lower part of the body below T4.

Answer: B

266.Intrafusal fibers are directly stimulated by:

A. Gamamotor neurons.
B. Alfamotorneurons.
C. Corticospinal fibers.
D. Interneurons.
E. Renshaw cells.

Answer: A

267.Which of the following is least adapting (non-adapting) sensation:

A. Fine touch
B. Pain.
C. Muscle spindle.
D. Joint capsule position.
E. Temperature.

Answer: B

268.An individual who could trace a picture of bicycle with his or her fingers but Could not recognize it as a bicycle is most likely to have sustained damage to the:

A. Calcarine cortex.
B. Primary visual area.
C. Visual area.
D. Lateral geniculate bogy.
E. None of the above.

Answer: C

269.Monitoring intention for movement and sending out corrective signals to Coordinate movement are important functions of:

A. The primary somatosensory area.
B. Upper motor neurons.
C. Basal ganglia.
D. The cerebellum.
E. The thalamus.

Answer: D

270.Which structure controls of the contralateral skilled movement:

A. Pregyrus area.
B. Wernicke area.
C. Broca area.
D. Primary motor cortex.
E. All of the above.

Answer: D

271.Which structure is responsible for knowing that you are holding sth In your Hand when your eyes are closed:

A. Cuneate.
B. Spinothalamic.
C. Gacialis.
D. Dorsal spinocerebellum.
E. Ventral spinocerebellum.

Answer: A

272.The brain area that regulates activities that control the state of Wakefulness or alertness of the cerebral cortex is the:

A. Thalamus.
B. Reticular formation.
C. Pyramids.
D. Limbic system.
E. None of the above.

Answer: B

273.Identify the incorrect statement regarding Sensory Receptors:

A. Are part of labeled line theory.
B. Are considered as energy transducers.
C. May release chemical materials.
D. Always form an action potential.
E. Are distributed in an uneven way.

Answer: D

274.Intrafusal muscle fibers contract when stimulated by:

A. Alpha motor neurons.
B. Upper motor neurons.
C. Gamma motor neurons.
D. Third- order neurons.
E. Interneurons.

Answer: C

275.The fastest in adaptation is:

A. Hair receptors.
B. Joints.
C. Propriocepters.
D. Blood composition.

Answer: A

276.Which structure is not necessary in sensation:

A. Interneural.
B. Motor neuron.
C. Receptor.
D. Sensory nerve connected to receptor.

Answer: B

277.Signal (sensory input) intensity:

A. More action potential.
B. More voltage.
C. More type of receptor.
D. More than one of the above.

Answer: A

278.Motor fiber:

A. All directly from pyramidal cell.
B. All directly from sensory input.
C. All are C fiber.
D. Supply extrafusal muscle fibers.

Answer: D

279.Fibers of sensations of pain, temperature and fine touch goes to:

A. Cuneate and gracile nuclei of the ipsilateral side.
B. Cuneate and gracile nuclei of the contalateral side.
C. Postcentral gyrus of the ipsilateral side.
D. Postcental gyrus of the contralateral side.

Answer: D

280.Which of the following outcomes is most likely to result from a cut at the level of T2 on the right side of the body?

A. Paralysis or weakness in the chest, upper back, and arms on the left side of the body.
B. Loss of sensation in the chest, upper back, and arms on the left side of the body.
C. Paralysis or weakness in the chest, upper back, and arms on the right side of the body.
D. Loss of sensation in the chest, upper back, and arms on the right side of the body.

Answer: B

281.The insensitive structure to pain stimuli is:

A. Dura matter.
B. Blood supply dura matter.
C. Cerebral hemisphere.

Answer: C

282.Correct match:

A. Enkephalin >> presynaptic Inhibition of A delta fibers*
B. Periventricular >endorphin.
C. Raphe magnus >enkephalin.

Answer: A

283.Which of the following is a correct match:

A. Periaquiduct -- serotonin.
B. Intracranial headache -- eye strain.
C. Non of the above.

Answer: C

284.Which of the following is the slowest adapting receptor:

Answer: Pain receptor.

285.Receptor potential:

Answer: Depends on the intensity of the stimulus.

Pathology

Dr. Mohammed Al-Wiswasy

286.Regarding the pathological features of diseases, all the following matches are correct EXCEPT:

A. Alzheimer disease - Neuritic plaques (amyloid core surrounded by dystrophic neurites) and neurofibrillary tangles.
B. Frontotemporal dementia - Atrophy of the frontal and temporal lobes, some subgroups characterized by specific inclusions consisting of accumulations of Lewy bodies.
C. Red neuron - Shrinkage nerve cell body with intense eosinophilia of the cytoplasm, pyknosis and angulation of the nucleus, disappearance of the nucleolus and loss of Nissl substance.
D. Parkinsonism - Syndrome of motor disturbances seen caused by damage to dopaminergic neurons of the substantia nigra or to their projection to the striatum.
E. Amyotrophic lateral sclerosis - Reduction in the number of anterior horn cell throughout the length of the spinal cord with loss anterior root myelinated fibers and reactive gliosis.

Answer: B

287.Which of the following statements is false:

Answer: Morphine is contraindicated in cancer pain.

288.The best drug that would aid in quitting smoking is:

Answer: Bupropion.

289.A marked adverse effect for Clonazepine is:

Answer: Agrganulocytosis.

290.The first line of Parkinson's treatments involves:

Answer: Levodopa and Carbidopa.

Dr. Shareif Shaltout

291.In absence carbidopa, which of the following decrease therapeutic effect of L-dopa:

A. Bromocriptine.
B. Ropinirole.
C. Vit 6.
D. Vit 12.
E. Benztropine.

Answer: C

292.Morphine used in patient with left ventricle because of all mechanism except:

A. Decrease preload.
B. Decrease afterload.
C. Bronchodilation.
D. Respiratory distress.
E. Shift blood from pulmonic circulation to systemic circulation.

Answer: C&E

293.Eating cheese can precipitate a hypertension crisis in a pt. treatment with which of the following drugs:

A. Diazepam.
B. Galoperidol.
C. Imipramine.
D. Pentobarbital.
E. Tranylcypromine.

Answer: E

294.Donepezil causes improvement in the memory of the pt. with Alzheimer by increasing transmission at which of the following receptors in the CNS:

A. Serotonin R.
B. Adrenergic R.
C. Cholinergic R.
D. Dopamine R.
E. GABA R.

Answer: C

295.All of the following antidepressants CT BY INCREASING THE level of both noradrenalin and serotonin (5-HT) EXCEPT:

A. Imipramine.
B. Maprotiline.
C. Venlafaxine.
D. Mirtazapine.
E. Buproption.

Answer: E

296.Adverse effect of L-dopa includes all of the following EXCEPT:

A. Nausea and vomiting.
B. Cardiac arrhythmias.
C. Postural hypotension.
D. Bronchoconstriction.
E. Involuntary choreoathetosis movement.

Answer: D

297.Which of the following will prevent abstinence (withdrawal) syndrome user:

A. Phenytoin.
B. Methadone.
C. Naloxone.
D. Diazepam.
E. Carbazepine.

Answer: C

298.Tolerance develops to all of the following morphine effects EXCEPT:

A. Miosis.
B. Analgesia.
C. Euphoria.
D. Respiratory depression.
E. Sedation.

Answer: A

299.Neurological adverse effects of neuroleptic drugs include:

A. Parkinsonism.
B. Akathisia.
C. Tradive dyskinesia.
D. All of the above.
E. None of the above.

Answer: D

300.Chlorpromazine increase secretion of:

A. Growth hormone.
B. Prolactin.
C. Thyroxine.
D. Insulin.
E. Corticotrophin-releasing hormone.

Answer: B

301.Clinical uses of morphine include all of the following EXCEPT:

A. Relief of pain from myocardial infraction.
B. Relief of cancer pain.
C. Relief of dyspnea of left ventricular failure.
D. Treatment of acute bronchial asthma.
E. Preanasthetic medication.

Answer: D

302.Which of the following is a selective inhibitor of monoamine oxidase-B:

A. Bromocriptine.
B. Carbidopa.
C. Selegiline.
D. Benzhexol.
E. Phenelzine.

Answer: C

303.Which of the following drugs is used to treat Obsessive compulsive disorder producing autonomic side effects:

A. Maprotiline.
B. Buprotiline.
C. Fluoxetine.
D. Amitriptyline.
E. Selegiline.

Answer: C

304.Morphine produces all the following actions EXCEPT:

A. Stimulation of CTZ.
B. Stimulation of oculomotor nerve nucleus in the midbrain.
C. Dilation of pupil.
D. Spasm of sphincter of Oddi.
E. Histamine release.

Answer: C

305.Which of the following is a pure opioid antagonist:

A. Methadone.
B. Nalbuphine.
C. Naloxone.
D. Buprenorphine.
E. Pentazocine.

Answer: C

306.In which case morphine can be used with no potential risk:

A. Elderly men pt.
B. Biliary colic pt.
C. Head injury pt.
D. Ischemic heart pt.

Answer: D

307.Drug of choice for depression with atypical symptoms:

A. MAO inhibitor.
B. Clomipramine.
C. Fluvoxamine.
D. Bupropion.

Answer: A

308.All are adverse effects of TCA except:

A. Alpha blocker.
B. H1 blocker.
C. Atropine like effect.
D. Safety margin is high.

Answer: D

309.All are increasing noradrenalin and serotonin except:

A. Amantadine.
B. Imipramine.
C. Clomipramine.
D. Maprotiline.

Answer: A

310.Regarding lithium carbonate Which statement is true:

A. Plasma level monitoring is induced.
B. Cause thyroid enlargement.
C. Mood stabilizer.
D. All of the above.

Answer: D

311.All are pharmacological of chlorpromazine except:

A. Schizophrenia.
B. Psychosis depressant.
C. Petit mal.
D. Vomiting.

Answer: C

312.Not true for pethidine:

A. Respiratory depression.
B. Convulsion.
C. Atrophied like action.
D. Bronchodilitation .

Answer: D

313.Antipsychotics can be used in all of the following except:

A. Schizophrenia.
B. Motion sickness.
C. Violent patient.

Answer: B

314.Treatment of addiction for long term:

A. Naltrexone.
B. Naloxone.
C. Pethidine.

Answer: A

315.Drug partial agonist to 5-HT1a and 5-HT and inhibit uptake of dopamine:

A. Aripiprazole.
B. Haloperidol.
C. Thioridazine.

Answer: A

316.Drug cause priapism:

A. Trazodone.
B. Nefazodone.
C. Amitriptyline.

Answer: A

317.Causes painful erection:

A. Venlafaxine.
B. Trazodone.
C. Selegiline.

Answer: B

318.All are side effect of Amitriptyline (or maprotiline) except:

A. A MAO inhibitor.
B. Increase body weight.
C. Safety margin is low.

Answer: A

319.Regarding carbidopa:

A. Prevent dopa decarboxylase in peripheral.
B. Prevent DA.
C. Decarboxylase.

Answer: A

320.All pharmacological of morphine except:

A. Inhibition to ADH.
B. Histamine release.
C. Inhibit VMC.

Answer: A

321.Drug that 80% potent than morphine is:

A. Fentanyl.
B. Methadone.
C. Tramadol.

Answer: A

322.Which adverse effect of antipsychotics persist even after stop the drug:

A. Parkinsonism.
B. Tardive dyskinesia.

Answer: B

323.A manic patient came to the emergency with elevated mood (singing out of reality) which drug of the following will you give him right now:

A. Lithium.
B. Haloperidol.

Answer: B

324.A drug used to prevent opioid abuse relapse after detoxification:

A. Methadone.
B. Naltrexone.

Answer: B

325.Old man came with urinary retention and his son said he takes an antidepressant, what is that drug:

Answer: Amitriptyline.

326.All seen in morphine poisoning except:

Answer: Mydriasis.

327.Cause rapid tolerance:

Answer: Amantadine.

328.Which of the following adverse effect increase by carbidopa:

Answer: Involuntary movement.

329.Which of the following drug use to treat violent patient:

Answer: Haloperidol.

330.Intra dermal patch used in cancer and chronic pain:

Answer: Fentanyl.

Biochemistry

Dr. Wala'a Al-Bayomie

331.Which of the followings would result mainly in an Excitatory Postsynaptic Potential (EPSP):

A. Binding of baclofen to nicotinic receptors.
B. Binding of endorphin to u opioid receptors.
C. Binding of serotonin to 5-HT5A receptor.
D. Binding of glutamate to GABAA receptors.
E. Binding of substance P to neurokinin 1 receptor.

Answer: C

332.Which of the following compounds is formed from hydroxylation requiring vitamin C and subsequent methylation:

A. Epinephrine.
B. Norepinephrine.
C. GABA.
D. Histamine.
E. Dopamine.

Answer: A

333.A 12-year-old boy develops convulsions. After running an Electroencephalogram (EEG), a neurologist determines that the child has epilepsy. He is started on benzodiazepine which promotes the activity of GABA. GABA is derived from Glutamate by which of the following reactions:

A. Deamination.
B. Transamination.
C. Decarboxylation.
D. Dehydrogenation.
E. Hydroxylation.

Answer: C

334.Which of the following need B6:

A. Histamine.
B. Serotonin.
C. GABA.
D. All of the following.

Answer: D

335.After neuronal excitation, the most likely neurotransmitter that Secreted in the post synapses:

A. Glutamate.
B. Glutamine.
C. Epinephrine.
D. Serotonin.

Answer: A

336.Tetra... Something is used is hydroxylation to form:

A. 5-HT.
B. Dopamine.
C. All.
D. None.

Answer: A

337.Which of the following don't occur during metabolism of epinephrine:

Answer: Carboxylation.

Dr. Thana'a

338.The action of the NT (neurotransmitter) can be stopped by the following mechanism EXCEPT:

A. The NT diffuse away out of the synaptic cleft.
B. NP are degraded by specific enzymes as peptidase.
C. Fusion of NT synaptic vesicle with membrane of axon terminal.
D. Glial cells remove NT from the synaptic cleft.
E. Reuptake into the axon terminal (through presynaptic receptors).

Answer: C

339.All of the following statements about serotonin are true EXCEPT:

A. Post-synaptic excitatory transmitter.
B. Tryptophan could be considered as precursor of serotonin.
C. It is metabolized by monoamine oxidase.
D. Its metabolite is 5-hydroxyindole acetic acid.
E. Serotonin is derived from tryptophan by hydroxylation and transamination.

Answer: E

340.Which of the following synthesized by hydroxylation then subsequent methylation:

A. Epinephrine.
B. Dopamine.
C. Norepinephrine.
D. Histamine.

Answer: A

Dr. Moayyad Aboud

341.In acetylcholine metabolism, the role of calcium influx is to stimulate:

A. Cholinesterase enzyme.
B. The exocytosis of presynaptic vesicles containing acytylcholine.
C. The enzyme cholineacetyl transferase.
D. The recycling of ACh.
E. The inactivation of Ach.

Answer: B