

# TEST BANK

Doctor 2019

## SUBJECT:

CNS-Mid

(physiology+Anatomy+pathology+microbiology  
+pharmacology+Behavioral+biochem)

## COLLECTED BY :

Majdoleen Hamed  
Ruaa Hdeib



## Anatomy

### 1-Wrong about disk on L4 root

- a. It affects knee jerk
- b. Sensory is affected in anteromedial leg aspect
- c. It is the most common disk
- d. Extension of the knee is affected because quadriceps femoris

### 2-Wrong about Extrapyramidal tracts?

- a. Medullary reticulospinal is in lateral white column
- b. Vestibulospinal tracts are uncrossed
- c. Rubrospinal tract isn't tonically active

### 3-Wrong about pons at level of facial colliculus

- a. Vestibular nucleus is medial to abducent nucleus at this level
- b. Facial nucleus is posterior to the lateral part of the medial lemniscus
- c. Spinal nucleus of trigeminal is anteromedial to Inferior Cerebellar Peduncle

### 4-Wrong about midbrain at the level of superior colliculus

- a. Pretectal nucleus is at the lateral part of the superior colliculus.
- b. Lateral lemniscus is posterior to substantia nigra
- c. Medial longitudinal fasciculus is anterolateral to oculomotor nucleus

### 5-Wrong about fast pain

- a. It is less related to emotion than slow pain
- b. Transmitted by A- alpha
- c. Synapse in lamina 1+5
- d. Mostly from superficial structures and well localized

### 6-Brain lesion causes loss of pain and temperature in left side of the body and right side of face with hoarseness, name the region of the lesion

- a. Medial medullary lesion B- lateral medullary lesion

- b. Millard Gubler D- Benedikt syndrome
- c. Weber syndrome

7-Tonsillar herniation cause all of the following except

- a. Hypertension B- increase in intracranial pressure
- b. Hyperventilation D- Dilation of pupil
- c. Decreasing levels of consciousness

8-Choose the wrong statement

- a. Gamma fibers activate the muscle fibers indirectly
- b. Secondary afferent is found around nuclear chain
- c. Primary afferent is found around nuclear bag
- d. Knee jerk is an example on static stretch reflex
- e. Nuclear Bag Fibers are supplied by dynamic Gamma

9-Wrong about central cord syndrome

- a. May be caused by hyperextension of the neck
- b. Occlusion in anterior spinal artery
- c. Lower limbs are more affected than upper
- d. Bilateral ALS+ some autonomic loss

10- Choose the wrong sentence about decerebrate and decorticate

- a. Both will cause extension of Lower limb
- b. Decerebrate will cause extension of upper limb
- c. Decerebrate have better prognosis
- d. Decorticate will cause flexion of upper limb

11-Wrong about glossopharyngeal nerve

- a. Preganglionic Parasympathetic fibers synapse in Otic ganglia
- b. Sensory to the carotid sinus come from tractus solitarius
- c. Fiber from stylopharyngeus muscle synapse directly beneath the floor of 4th ventricle
- d. Supply middle ear general sensation from spinal nucleus of trigeminal

12-Wrong about lateral spinothalamic

- a. It is early crossed by anterior white commissure
- b. Has wide spread cortical region
- c. Synapse in ventral posteromedial nucleus of the thalamus
- d. Related to pain and temperature

13-Wrong about Brown sequard syndrome

- a. Causes loss of ALS above the lesion
- b. Causes loss of PCML IPSI lateral at the same level and below
- c. Affects motor (cause motor weakness) IPSI lateral

14-Choose the wrong about parasympathetic

- a. Parotid is supplied by nerve from Superior salivary
- b. Lacrimal is supplied from nerve from superior lacrimal nucleus

15-Which of the following means Collection of axon in the central nervous system:

- a. Ganglion
- b. Nerve
- c. Nucleus
- d. Soma
- e. Tract

16-The outer layer of connctive tissue that surrounds the nerve is called:

- a. Epineurium
- b. Epithelium
- c. Glial cells
- d. Endoneurium
- e. Perineurium

17-The term "Mesencephalon" means:

- a. Pons
- b. Cerebellum
- c. Midbrain
- d. Medulla
- e. Cerebrum

18-The Dura matter extends from the level of the foramen magnum to the level of?

- a. L2
- b. S1
- c. S2
- d. S3
- e. S4

19-Which of the following tracts has descending autonomic fibers providing a pathway by which the hypothalamus can control the sympathetic and sacral parasympathetic outflow?

- a. Rubrospinal tracts
- b. Tectospinal tracts
- c. Vestibulospinal tracts
- d. Anterior corticospinal tract
- e. Reticulospinal tracts

20-Which of the following is the most common direction of Disc herniation?

- a. Posteromedial direction
- b. Anteromedial direction
- c. Superior direction
- d. Anterolateral direction
- e. Posterolateral direction

21-Which of the following represents the function of Posterior White

## Column-Medial Lemniscal Pathway?

- a. Temperature
- b. Pain
- c. Conscious Proprioception
- d. Crude touch
- e. Unconscious Proprioception

22-Which of the following represents the location second order neuron of the lateral spinothalamic tract?

- a. Thalamus
- b. Substantia gelatinosa of spinal cord
- c. Dorsal root ganglia
- d. Medulla
- e. Nucleus Gracilis

23-Which of the following structures is responsible for the interpretation of the emotional aspect of Pain?

- a. Occipital lobe
- b. Cingulate gyrus
- c. Insula
- d. Midbrain
- e. Reticular formation

24-Which of the following tracts provides afferent information for spinovisual reflexes?

- a. Anterior spinothalamic
- b. Lateral spinothalamic
- c. Posterior spinocerebellar
- d. Anterior spinocerebellar
- e. Spinotectal

25-Which of the following fibers carries the sensation of fast pain?

- a. A alpha fibers
- b. A beta fibers
- c. A delta fibers
- d. C fibers
- e. None of the above

26-Second order neuron of Posterior spinocerebellar tract will enter cerebellum through:

- a. Superior cerebellar peduncle
- b. Middle cerebellar peduncle
- c. Inferior cerebellar peduncle
- d. Crus cerebri
- e. None of the above

27-Lamina 3 and 4 of grey matter of spinal cord contains:

- a. Intermedio-medial nucleus
- b. Intermedio-lateral nucleus
- c. Nucleus proprius
- d. Substantia gelatinosa
- e. Dorsal nucleus of Clark's

28-If the knee jerk is lost, which of the following roots is most likely affected?

- a. L3
- b. L4
- c. S1
- d. S2
- e. L5

29-Which of the following anchors spinal cord to coccyx?

- a. Denticulate ligament

- b. filum terminale
- c. Cauda equina
- d. Conus medullaris
- e. None of the above

30-Regarding Internal structure of pons, which of the following is located anterior to trapezoid body?

- a. Tectum
- b. facial colliculus
- c. Tapetum
- d. Tegmentum
- e. Basal part

31-Which of the following is considered as part of the acoustic pathway?

- a. Facial nucleus
- b. Trigeminal lemniscus
- c. Spinal lemniscus
- d. Lateral lemniscus
- e. Medial lemniscus

32-Which of the following represents the location of the Facial nucleus?

- a. Lateral to the spinal nucleus
- b. Posterior to the lateral part of the medial lemniscus
- c. Lateral to the abducent nucleus
- d. Beneath the floor of the fourth ventricle

33-Anterolateral aspect Regarding a transverse section through the inferior colliculus of midbrain, choose the WRONG statement:

- a. Temporo-pontine fibers are located anterior to substantia nigra
- b. Mesencephalic nucleus of trigeminal nerve is located lateral to cerebral aqueduct
- c. Medial longitudinal fasciculus is located posterolateral to the motor nucleus of trochlear nerve

- d. Decussation of superior cerebellar peduncles is anterior to the cerebral aqueduct
- e. Medial Cerebellar peduncle And spinal lemnisci are located posterior to substantia nigra

34-Regarding Foville syndrome, Choose the wrong statement?

- a. It causes Ipsilateral dilatation of pupil
- b. It causes contralateral hemiparesis
- c. It occurs due to occlusion of the paramedial branches of basilar artery
- d. It causes variable contralateral sensory loss
- e. It causes ipsilateral abducens nerve paralysis

35-Which one of the following cranial nerves is arising from interpeduncular fossa?

- a. Optic
- b. Olfactory
- c. Trigeminal
- d. Oculomotor
- e. Trochlear

36-Which one of the following cranial nerve nuclei is not present in the pons?

- a. Main sensory nucleus of trigeminal
- b. Motor nucleus of trigeminal
- c. Superior salivary nucleus of facial
- d. Nucleus ambiguus
- e. Abducent motor nucleus

37-Which of the following structures lies in the midbrain?

- a. In Optic chiasma
- b. Fascial colliculus
- c. Substantia nigra
- d. Basilar groove
- e. Pyramidal eminence

38-Which of the following cranial nerves emerges from the posterior aspect of the brain stem?

- a. Vestibulocochlear
- b. Facial
- c. Trochlear
- d. Abducent
- e. Trigeminal

39-Which of the following connects inferior Colliculus with medial geniculate body?

- a. Medial longitudinal fasciculus
- b. Lateral lemniscus
- c. Medial lemniscus
- d. Inferior brachium
- e. Superior brachium

40-Which of the following diseases is caused by the death of neurons in the substantia nigra?

- a. Alzheimer's disease
- b. Schizophrenia
- c. Parkinson disease
- d. Multiple sclerosis
- e. Huntington disease

41-Regarding reticular formation, which of the following contains intermediate-size neurons?

- a. Superior column
- b. Lateral column
- c. Inferior column
- d. Medial column
- e. Median column

42-All of the following are symptoms of Wallenberg syndrome EXCEPT?

- a. Contralateral loss of pain and temperature sensation from the body
- b. Ipsilateral loss of pain and temperature sensation from the face
- c. Vertigo and nystagmus
- d. Hoarseness and dysphagia
- e. Loss of taste from the contralateral half of the tongue

43-Anterior inferior cerebellar artery is branch from:

- a. Basilar artery
- b. Anterior spinal artery
- c. Posterior cerebral artery
- d. Vertebral artery
- e. Posterior spinal artery

44-Occlusion of Anterior spinal artery may cause:

- a. Foville syndrome
- b. Benedikt syndrome
- c. Millard-Gubler syndrome
- d. Wallenberg syndrome
- e. Dejerine syndrome

45-Which of the following represents the location Corticospinal fibers in cross section of a midbrain?

- a. Substantia nigra
- b. Red nucleus
- c. Tectum
- d. Crus cerebri
- e. Tegmentum

46-The union of the two vertebral arteries forms:

- a. Posterior spinal artery

- b. Basilar artery
- c. Anterior spinal artery
- d. Vertebral artery
- e. Posterior cerebral artery

47-Which of the following brain stem nuclei supplies parasympathetic stimulation to the submandibular gland?

- a. Solitary nucleus
- b. Edinger-Westphal nucleus
- c. Superior salivatory nucleus
- d. Dorsal vagal nucleus
- e. Inferior salivatory nucleus

48-Which of the following modalities are transmitted to the spinal nucleus of trigeminal nerve?

- a. Conscious Proprioception
- b. Unconscious Proprioception
- c. Pain and temperature
- d. Two point discrimination
- e. None of the above

49-The initial resistance observed in the Clasp knife reaction is due to:

- a. Exaggerated stretch reflex
- b. Lost stretch reflex
- c. Exaggerated Golgi tendon reflex
- d. Lost Golgi tendon reflex
- e. None of the above

50-Which of the following represents the cavity found in a cross section of Midbrain?

- a. Cerebral aqueduct

- b. Cerebral canal
- c. Fourth ventricle
- d. Foramen of Mono
- e. Foramen of luschka

51-Regarding the Lateral corticospinal tract, choose the WRONG statement:

- a. This tract is a pyramidal tract
- b. In the midbrain they pass through the middle three fifths of the basis pedunculi of the midbrain
- c. This tract passes through the basilar part of pons
- d. Their function is subconscious regulation of balance and muscle tone
- e. This tract decussates to the opposite side in the lower part of medulla

52-The majority of fibers of the Lateral corticospinal tract synapse:

- a. Thoracic region
- b. Cervical region
- c. Coccygeal region
- d. Lumbar region
- e. Sacral region

53-Regarding Anterior corticospinal tract, choose the WRONG statement:

- a. It acts on the proximal (axial) muscles
- b. It passes through the basilar part of the pons
- c. In the midbrain they pass through the middle three fifths of the basis pedunculi of the midbrain
- d. 55% of its fibers synapse in the upper cervical region
- e. Its fibers will descend on the same (ipsilateral) side of the cord

54-Regarding Extraparamidal tracts, choose the WRONG statement:

- a. Vestibulospinal tract facilitates the activity of antigravity muscles
- b. Pontine reticulospinal tract descend uncrossed into the spinal cord
- c. Rubrospinal tract is part of the lateral motor system

- d. Tectospinal tract descends in the anterior white column close to anterior median fissure
- e. Medullary reticulospinal tracts is tonically active

55-Which of the following tracts has descending autonomic fiber providing a pathway by which the hypothalamus can control the sympathetic sacral parasympathetic outflow?

- a. Rubrospinal tracts
- b. Tectospinal tracts
- c. Vestibulospinal tracts
- d. Anterior corticospinal tract
- e. Reticulospinal tracts

56-Regarding Rubrospinal tract, choose the WRONG statement:

- a. Located in the anterior white column
- b. It is crossed
- c. Facilitate the activity of flexors
- d. Its fibers descend from red nucleus
- e. Inhibit the activity of extensors

57-Regarding Pontine reticulospinal tract, choose the WRONG statement:

- a. Its fibers descend from reticular formaion of the pons
- b. It is tonically active
- c. It is normally under inhibition from cortex
- d. Located in the anterior white column
- e. It activate the axial and proximal limb flexors

58-Which of the following tracts is responsible for reflex movement of head and neck in response to visual stimuli?

- a. Rubrospinal tracts
- b. Vestibulospinal tracts
- c. Anterior spinothalamic

- d. Reticulospinal tracts
- e. Tectospinal tracts

59-All of the following are symptoms of upper motor neuron lesions EXCEPT?

- a. Hyperreflexia
- b. Hypertonia
- c. Wasting
- d. Clasp knife reaction
- e. Clonus

60-Which of the following cavities can be seen at the level of pyramidal decussation?

- a. Cerebral aqueduct
- b. Third ventricle
- c. Upper part of the fourth ventricle
- d. Central canal
- e. Lower part of the fourth ventricle

61-Regarding Central Cord Syndrome, choose the WRONG statement:

- a. Bladder dysfunction
- b. Can cause two point discrimination loss
- c. Can cause bilateral weakness of the extremities
- d. Occur due to occlusion of the anterior spinal artery
- e. May result from hyperextension of the neck

62-Which of the following structures receives taste fibres?

- a. Hypoglossal nucleus
- b. Vestibular nuclei (medial and inferior)
- c. Nucleus ambiguus
- d. Dorsal nucleus of vagus
- e. Solitary nucleus (nucleus of tractus solitaries)

63-All of the following structures Lies beneath the floor of 4th ventricle EXCEPT?

- a. Dorsal nucleus of vagus
- b. Hypoglossal nucleus
- c. Nucleus ambiguus
- d. Vestibular nuclei (medial and inferior)
- e. Solitary nucleus

64-Which of the following structures is composed of ascending fibers from the vestibular nuclei to the motor nuclei of the third, fourth and sixth cranial nerves?

- a. Medial lemniscus
- b. Fasciculus gracilis
- c. Lateral lemniscus
- d. Medial longitudinal fasciculus
- e. Fasciculus cuneatus

65-The cerebral area which is responsible for production of fine movements of hand is located:

- a. In the superior temporal gyrus
- b. Behind the central sulcus
- c. On the medial surface of the brain
- d. In the occipital lobe
- e. In front of the central sulcus

66-All of the following are branches of basilar artery EXCEPT:

- a. Labyrinthine artery
- b. Posterior inferior cerebellar artery
- c. Anterior inferior cerebellar artery
- d. Pontine arteries
- e. Superior cerebellar artery

67-Regarding Premotor area, All of the following are true EXCEPT:

- a. Lesions of this area alone produce more severe paralysis than destruction of primary motor area
- b. It receives numerous inputs from the sensory cortex, the thalamus, and the basal ganglia
- c. It uses cues for the selection of appropriate action
- d. It is involved in controlling coarse postural movements
- e. It is located anterior to the primary motor area

Answers

1	c	18	c	35	d	52	b
2	c	19	e	36	d	53	d
3	a	20	e	37	c	54	e
4	b	21	c	38	c	55	e
5	b	22	b	39	d	56	a
6	b	23	b	40	c	57	e
7	d	24	e	41	e	58	e
8	d	25	c	42	e	59	c
9	c	26	c	43	a	60	d
10	c	27	c	44	e	61	b
11	c	28	b	45	d	62	e
12	c	29	b	46	b	63	c
13	a	30	e	47	c	64	d
14	a	31	d	48	c	65	e
15	e	32	b	49	a	66	b
16	a	33	c	50	a	67	a
17	c	34	a	51	d	-	-

68- Wrong about trigeminal nerve

- Innervates stapedius muscle

69- Wrong about glossopharyngeal injury

- Dysphagia and nervous type dysphagia

70- Wrong about hypoglossal nerve

- Supplies tongue with SVE (special visceral efferent) fibers

71- A woman who had lost cold and hot differentiation from the right half of her face, and the left half of her body, with left nystagmus. The lesion is mostly in

- Right medulla

72- Wrong statement

- ML projects to the thalamus through VPM (removed)

73- Wrong about motor cortex

- Connected to ipsilateral body

74- Wrong combination

- Activation of gamma motor neuron leads to – faster muscle contraction

75- The cause of spasticity in spinal cord lesions is loss of

- Medullary reticulospinal tract

76- A patient unable to move the left eye out and below and spastic hemiplegia in the right half of the body, obstruction is most likely in

- Posterior cerebral artery (removed)

77- Wrong about pain

- Connected only to laminae I and V

78- Wrong about the eye

- Contraction of ciliary muscle makes the lens thinner

79- Wrong statement

- Superior olivary nucleus is the only auditory nucleus that doesn't receive input from both ears

80-Wrong about eye

- Beta small ganglionic cells show center-surround activation

81-Wrong about MLF

- If right one is lost, when asked to look left, left eye cannot abduct

82-Wrong about oculomotor lesion

- Mild ptosis

83-Wrong statement

- Intermittent claudication is an example of visceral pain

# Anatomy-018

1-Regarding the parasympathetic nuclei of the brainstem, all are true EXCEPT:

- a. Fibers from the inferior salivatory nucleus synapse in the pterygopalatine ganglion
- b. The dorsal vagal nucleus is located underneath the floor of the 4th ventricle
- c. Fibers from the superior salivatory nucleus synapse in the submandibular ganglion
- d. The Edinger-Westphal nucleus supplies the constrictor pupillae muscle
- e. Superior salivatory nucleus supplies the sublingual salivary gland

2-All of the following are symptoms of the Syndrome of the midpontine base EXCEPT:

- a. Ataxia
- b. Ipsilateral paralysis of the masticatory muscles
- c. Ipsilateral loss of pain and thermal sense
- d. Contralateral dilatation of pupil
- e. Contralateral hemiparesis

3-Regarding Syringomyelia affecting C4 to C5 levels, choose the WRONG statement:

- a. If it extends to include one anterior horn, it will cause an ipsilateral weakness of the upper extremity
- b. Discriminative touch will be affected
- c. Symptoms of syringomyelia occur due to the damage of fibers crossing in the anterior white commissure in both directions
- d. It occurs due to cavitation of the central region of the spinal cord
- e. Loss of pain and thermal sensation will include both shoulders and extend down to nipple level

4-A 65 years old man with a history of hypertension and smoking brought to neurology clinic. The neurologic examination reveals loss of pain and temperature sensation from the right side of the body, loss of pain and temperature sensation from the left side of the face, loss of taste from the left half of the tongue and hoarseness, which of the following arteries is likely affected in this patient?

- a. Posterior inferior cerebellar artery
- b. Anterior inferior cerebellar artery
- c. Anterior cerebral artery
- d. Middle cerebral artery
- e. Anterior spinal artery

5-All of the following are characteristics of lower motor neuron lesion EXCEPT:

- a. Flaccid paralysis
- b. Hypotonia
- c. Clasp knife reaction
- d. Hyporeflexia
- e. Muscle atrophy

6-During a neurological examination, a patient cannot tell with his eyes closed whether the neurologist flexed or extended his toe, there is likely damage to

- a. The anterolateral spinothalamic system pathway.
- b. The precentral gyrus of the cerebral cortex.
- c. The ventral (anterior) of the spinal cord.
- d. The dorsal column medial lemniscal pathway.
- e. Central canal of the spinal cord enlargement (syringomyelia).

7-Regarding Corticospinal tracts choose the WRONG statement:

- a. The vast majority of fibers will decussate to the opposite side in the lower part of medulla forming the lateral corticospinal tract
- b. In the midbrain they pass through the middle three fifths of the basis pedunculi of the midbrain
- c. It passes through the basilar part of the pons
- d. The anterior corticospinal tract acts on the proximal (axial) muscles
- e. 55% of lateral corticospinal tract fibers synapse in the thoracic region

8-Regarding posterior white column medial lemniscal pathway, choose the WRONG statement:

- a. Sensory fibers used in this system are faster than those used in the anterolateral system (ALS)
- b. Fasciculus cuneatus transmits information coming from areas inferior to T6
- c. Lesion of this tract will result in loss of discriminative touch below the level of the lesion on the ipsilateral side of the body
- d. This system employs most receptors except free nerve endings
- e. Nucleus gracilis and nucleus cuneatus represent the location of the cell body of the second order neurons

9-Regarding Extrapyrmidal tracts, choose the WRONG statement:

- a. Vestibulospinal tract facilitates the activity of antigravity muscles
- b. Rubrospinal tract mainly supply the distal extensors muscles with little effect on the proximal muscles
- c. Tectospinal tract is responsible for reflex movement of head & neck in response to visual stimuli
- d. Medullary reticulospinal tracts runs in the lateral white column
- e. Pontine reticulospinal tract is tonically active

10-Regarding slow pain , all of the following are true EXCEPT:

- a. Slow pain is mostly arises from superficial structures
- b. Slow pain due to gallstones can be felt up in the shoulders
- c. It is transmitted by c fibers
- d. Cingulate gyrus brings about an emotional response to slow pain
- e. First order neuron synapses with second order neuron in Lamindel and II

11-Regarding a transverse section through the caudal part of pons , all of the following are true EXCEPT

- a. Medial longitudinal fasciculus is located beneath the floor of the fourth ventricle
- b. Basal part of pons is located anterior to trapezoid body
- c. Facial nucleus is located anterior to the lateral part of the medial lemniscus
- d. Spinal nucleus of trigeminal is located on the anteromedial aspect of inferior cerebellar peduncle
- e. Medial vestibular nucleus is located lateral to the abducent nucleus

12-Regarding disc herniation , all of the following are true EXCEPT:

- a. If the disc between L4 / L5 is herniated sensory changes will likely occur at the medial border of leg
- b. S1 spinal nerve is tested by asking the patient to stand on his tiptoes
- c. If the spinal nerve L4 is compressed by a herniated disc knee jerk will be lost
- d. If the spinal nerve S1 is compressed by a herniated disc gastrocnemius muscle will be weakened
- e. It may cause low back pain radiating to the gluteal region and the back of the thigh

Answers:

- 1-A
- 2-D
- 3-B
- 4-A
- 5-C
- 6-D
- 7-E
- 8-B
- 9-B
- 10-A
- 11-C
- 12-A

## Physiology-018

1-Which of the following statements concerning the sense of hearing is true:

- a. The outer hair cells of the organ of Corti are the main receptors and their number is less than the inner hair cells.
- b. Contraction of tensor tympani and stapedius muscles (attenuation reflex) increases transmission low frequency sound through middle ear.
- c. Actual conversion of sound waves into electrical potentials occur at the level of middle ear ossicles.
- d. High intensity sound waves result in vibration of the basilar membrane close to the oval window.
- e. Low frequency sound results in vibration of the basilar membrane far from the oval window.

2-A patient complains of dry skin and poor vision at night. You diagnose the patient with vitamin deficiency. Which molecule is NOT present in sufficient amount in the eye of vitamin A deficiency.

- a. Retinal.
- b. Opsin.
- c. Transducin.
- d. Phosphodiesterase.
- e. Cyclic GMP.

3-Inability to hear by one ear which is beyond any means of correction can be due to a lesion located at:

- a. Unilateral inferior colliculus.
- b. Unilateral superior temporal cortex.
- c. Unilateral basilar membrane involving its organs of Corti.
- d. Unilateral superior olivary nucleus.
- e. Unilateral lateral lemniscus.

4-A patient is found to have tunnel vision (bitemporal hemianopia) due to a pituitary tumor. Where might this lesion be?

- a. Left optic nerve
- b. Optic chiasm
- c. Right optic nerve.
- d. Left optic tract
- e. Right lateral geniculate nucleus

5-Thanks to ..... we can distinguish sweet, salty, bitter, sour, and umami tastes.

- a. Locations on the tongue where each taste is processed.
- b. The presence of five categories of taste buds.
- c. Specialized receptor potential for each one of them.
- d. A high concentration of salty and sweet receptors.
- e. Specialized taste receptors.

6-Regarding slow pain , all of the following are true EXCEPT

- a. Slow pain is mostly arises from superficial structures
- b. Slow pain due to gallstones can be felt up in the shoulders
- c. It is transmitted by c fibers
- d. Cingulate gyrus brings about an emotional response to slow pain
- e. First order neuron synapses with second order neuron in Lamindel and II

7-The sense of smell is perceived in the

- a. Limbic system
- b. Occipital lobe of the cerebral cortex
- c. Parietal lobe of the cerebral cortex
- d. Temporal lobe of the cerebral cortex
- e. Insular part of the cortex

8-Which of the following is TRUE combination?

- a. Accommodation for near vision: The ciliary muscle relaxes and the lens decreases its power.
- b. In Myopia: The near point (minimal distance) is further than normal and people see clearly far objects.
- c. During dark adaptation: The sensitivity of photoreceptors is reduced so that the image appears dim.
- d. A visual acuity of 6/60 means: Can resolve a test figure at 60 meters using a + 6 diopters lens.
- e. Color vision: Various ratios of stimulation of the three cones in response to different wave lengths of light.

9-Which of the following is NOT a suitable combination?

- a. Loss of pain, temperature, and touch sensation on the right side of the face : A lesion of the trigeminothalamic tract on the left
- b. Amorphosynthesis ( unilateral neglect ) : A lesion in the auditory or visual association cortexes
- c. Slow pain : Poorly localized sensation runs through C fibers
- d. Myocardial infarction in females : Referred pain to sternum and left upper limb
- e. Astereognosis : Inability to identify familiar object form and texture by hand when eyes are closed

10-Which of the following statements describe the endogenous analgesia system?

- a. It uses endogenous opiates (endorphins , dynorphins or enkephalins)
- b. It decreases pain transmission at the dorsal horn cells through stimulating the release of substance p
- c. It is an ascending system pathway
- d. It takes origin from the cerebellar nuclei and red nucleus of the brain stem
- e. It is contralateral pathway

Answers:

1-E

2-A

3-C

4-B

5-E

6-A

7-A

8-E

9-B

10-A

# Pathology

Note: There are no past papers for Dr. Maha and Dr. Nisreen. These questions for Dr. Heyam to test your self.

1- Choose the correct statement regarding red neurons :

- a. They indicate irreversible injury to neurons .
- b. Their nuclei are small and hyperchromatic .
- c. They are characterized by increased cytoplasmic endoplasmic reticulum .
- d. Their dendrites are the main component of gliosis
- e. They are seen in multiple sclerosis quiescent plaques .

2- A 67 year old lady complained of sudden weakness in her right arm followed by slurred speech and facial asymmetry. No hemorrhage was seen on a CT scan. The most common cause of her symptoms is :

- a. Thrombotic occlusion of the middle cerebral artery .
- b. Embolic occlusion of the middle cerebral artery
- c. embolic occlusion of the middle meningeal artery
- d. Thrombotic occlusion of the middle meningeal artery .
- e. Paradoxical embolus

3- Choose the INCORRECT statement regarding multiple sclerosis (MS):

- a. Axonal damage occurs late in the disease process .
- b. The disease is caused by loss of immune tolerance to a myelin protein
- c. Characterized by grey matter plaques separated in time and space .
- d. T helper cells play a major role in MS pathogenesis
- e. Patients have more IgG in their CSF than in the serum .

4- All of the following are complications of transtentorial herniation except :

- a. Brain stem hemorrhage
- b. Ischemic damage of the visual cortex
- c. Third cranial nerve compression
- d. Impaired ocular movement
- e. Anterior cerebral artery compression .

5- Which of the following is not a feature of epidural hematoma ?

- a. Almost always due to trauma .
- b. Associated with skull fractures
- c. Hemorrhage caused by bridging veins tear .
- d. Brain parenchyma is compressed
- e. Appears as biconvex shape with CT scan .

6-The most common site of embolic obstruction :

- a. Middle cerebral artery
- b. Anterior cerebral artery
- c. Basilar artery

7-Epidural hematoma results from injury to :

- a. Middle cerebral artery
- b. Bridging veins
- c. Middle meningeal artery

8-Choose the incorrect combination :

- a. Gemistocytes and repair .
- b. Red neurons and loss of Nissl substance .
- c. Rod cells and microglia
- d. Oligodendrocytes and peripheral nervous system myelin production
- e. Lewy bodies and Parkinson disease

9-Which of the following is a fatal complication of transtentorial herniation ?

- a. Duret haemorrhages
- b. Compressed anterior cerebral artery
- c. Compressed posterior cerebral artery
- d. Compression of the oculomotor nerve
- e. All of the above

10-The source of blood in the subdural hematoma is :

- a. Bridging veins
- b. Middle cerebral
- c. Middle meningeal
- d. Basilar
- e. Anterior cerebral

11-All of the following are complications of trans-tentorial herniation except:

- a. Compression of the anterior cerebral artery.
- b. Impaired ocular movement
- c. linear bleedings in the midbrain.
- d. Ischemic injury to the visual cortex.
- e. Duret hemorrhage.

12-The following combinations are true except:

- a. Multiple scleross and oligoclonal bands.
- b. Central pontine myelinolysis and rapid correction of hyponatremia
- c. Quiescent plaques in multiple sclerosis and gliosis
- d. Neuromylitis optica and aquaporin 4 antibodies
- e. Multiple sclerosis and grey matter plaques

13-While examining a histologic slide from the brain tissue of a 77-year-old woman who died after suffering from a road traffic accident you noted shrunk neurons with intense eosinophilic cytoplasm and pyknotic nuclei. You also found occasional extracellular amyloid plaques. Her brain weight was larger than normal with narrow sulci and wide gyri. Which of the following conclusions about her condition is CORRECT?

- a. Prior to the accident, this lady most likely suffered from dementia.
- b. The intense eosinophilia in the neurons is a result of increased Nissl substance.
- c. She died within less than an hour of the accident.
- d. The narrow sulci and wide gyri suggest that she definitely had a history of hypertension.
- e. The neurons described are a consequence of hypoxic damage and the brain weight supports this assumption.

14-Choose the incorrect statement regarding epidural hematoma

- a. The accumulated blood is arterial in origin.
- b. Blood accumulates between the dura and the skull
- c. Associated with skull fracture
- d. Bleeding appears crescentic in shape on CT scan.
- e. Caused by ruptured middle meningeal artery

15-Wrong about MS :

- It affects both peripheral and central nerves

16-The most common cause of intracranial hemorrhage is :

- Hypertension

17-Choose the correct statement :

- Neurons are more susceptible to hypoxic injury than oligodendrocytes

18-A woman had an ischemic stroke after tonsillectomy, wrong about this :

- Brain is shrunken with wide gyri and narrow sulci

Answers :

1-B.      2-B.      3-C.

4-E.      5-C.      6-A.

7-C.      8-D.      9-A

10-A.      11-A.      12-E.

13-E.      14-D

# Micro

1-Which of the following is true regarding infectious causes of peripheral neuropathy?

- a. Postherpetic neuralgia is neuropathic pain in a dermatomal pattern that commonly follows an episode of herpes simplex virus-type 2 (HSV-2) infection.
- b. Symptoms of Botulinum toxin ingestion first appear as a descending flaccid paralysis that starts with cranial nerves.
- c. More than 70% of infections with poliovirus will result in flaccid paralysis.
- d. Varicella zoster virus primary site of dormancy is in neuromuscular junctions.
- e. Infectious causes of peripheral neuropathy are more common than vascular and inflammatory causes.

2-Symmetrical ascending motor weakness, areflexia, and mild-to- moderate sensory abnormalities are likely to occur following an infection with one of the following pathogens :

- a. Streptococcus pneumoniae
- b. Escherichia coli
- c. Clostridium botulinum.
- d. Campylobacter jejuni .
- e. Herpes simplex type-1 virus.

3-True statement:

- Botulinum toxin inhibits Ach release at neuromuscular junctions

4-The only bad thing about OPV compared to IPV:

- Can rarely cause paralytic poliomyelitis

Note:

OPV: oral polio vaccine

IPV: inactivated polio vaccine

5-False about polio:

- Hygiene affects development of paralysis after infection

6-False about polio:

- Non-paralytic form of the disease progress to paralysis within few days

7-False about polio:

- Epidemic paralytic polio is common worldwide

# Biochemistry

1-Which of the following is TRUE about arrestin:

- a. Works by phosphorylation of target protein
- b. In Dark it is existed at high levels at the outer segments of photoreceptors
- c. It causes the release of all cis retinal rhodopsin

2-All of the following are mechanisms to amplify visual signal except:

- a. Each photon excites many rhodopsin
- b. Each rhodopsin excites many transducin
- c. Each transducin excites many PDE
- d. Each PDE converts many CGMP
- e. All in the same compartment

3-When light strikes the eye there is an increase in:

- a. The activity of the transducin
- b. The amount of transmitter released from the photoreceptors
- c. The concentration of all-trans retinal within the photoreceptors
- d. The concentration of calcium within the photoreceptors
- e. The activity of guanylyl cyclase

4-Activation of transducin by light activates an enzyme which:

- a. Hydrolyzes cGMP
- b. Increases the dark current
- c. Activatesadenylylcyclase
- d. Releases calcium from intracellular stores
- e. Depolarizes the membrane

5-Visual transduction involves the following molecular feature:

- a. Ca<sup>2+</sup> ions bind to rhodopsin kinase and inhibit it
- b. Retinal plasma membrane is very fluidic easing molecular interactions
- c. Amplification involves activation of CGMP phosphodiesterase by G proteins
- d. Arrestin binding to rhodopsin activate its phosphorylation
- e. During adaptation to the dark, recoverin is mainly localized to the inner segment

6-Which statement is WRONG about signal termination in photoreceptor cells:

- Inactivation of G cyclase due to decrease intracellular [Ca]

7-Which one of the following is TRUE about vision:

- cGMP decreases when transducin activated

8-The function of Cones:

- For color vision

1.a

2.c

3.a

4.a

5.b

# Pharma

1- Local anesthetic agents block nerve conduction by:

- Altering metabolism.
- Interfering with  $\text{Na}^+\text{K}^+-\text{ATPase}$ .
- Increasing the resting membrane potential.
- Blocking  $\text{Na}$  channels in the nerve membrane.
- Blocking yaminobutyric acid type B (GABA B) receptors.

2-Which of the following Local Aesthetic Agents has a rapid onset and a short duration of action:

- Articaine
- Lidocaine
- Tetracaine
- Bupivacaine

3-All can be applied as local anesthetics except :

- Injection directly inside a major nerve trunk
- Filtration
- Epidural
- Topical

4-Which of the following is true about the mechanism of action of local anesthetic?

- Local anesthetics block the outer gate of the  $\text{Na}^+$  channels
- None of the other options are true
- Local anesthetics block the inner gate of the  $\text{k}^+$  channels.
- Local anesthetics block the inner gate of the  $\text{Na}^+$  channels
- Local anesthetic block the inner gate of the glutamate channels

5-Wrong combination:

- Ketamine -- depress heart activity

(إِنَّمَا يُوفَى الصَّابِرُونَ أَجْرَهُمْ بِغَيْرِ حِسَابٍ)

1.d  
2.b  
3.a  
4.d