



# MID CNS 020 EXAM

Collected by:  
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## ANATOMY

**1- Which of the following glial cells is responsible for the myelination of peripheral nerves?**

- a. oligodendrocytes
- b. Shwan
- c. astrocytes
- d. microglia
- e. ependymal

Ans: B

**2- Regarding the caudate nucleus, which of the following is Incorrect?**

- a. It is a large C-shaped mass of grey matter
- b. It is formed of head, body, and tail
- c. It's head is related to floor of the central part of the lateral ventricle
- d. It is a part of neostriatum
- e. It's tail is continuous with the amygdaloid nucleus

Ans: C

**3- Which of the following is false about the cerebral cortex?**

- a. The function of cingulate gyrus is gustation
- b. Area 6 is extrapyramidal in function
- c. The uncus is present on the inferior surface of the cerebral hemisphere
- d. Stimulation of area 8 moves both eyes
- e. Lingual gyrus lesion affects part of contralateral visual field

Ans: A

**4- A 60-year old hypertensive female complained of fascial numbness on the right side including the tongue. A cortical lesion was seen with MRI. Where the lesion would most likely be found?**

- a. Anterior paracentral lobule
- b. Posterior paracentral lobule
- c. Precentral gyrus
- d. Postcentral gyrus
- e. Angular gyrus

Ans: D

**5- Which of the following is not a constituent of the association fibers?**

- a. Tapetum
- b. Cingulum
- c. Superior longitudinal bundle
- d. Inferior longitudinal bundle
- e. Uncinate fasciculus

Ans: A

**6- concerning the internal capsule, which of the following is incorrect**

- a. The anterior limb contains frontopontine fibers.
- b. The caudate nucleus is lateral to its anterior limb
- c. The posterior limb contains projection fibers
- d. The anterior choroidal artery supplies parts of it
- e. Lesion in its genu could affect smiling

Ans: B

**7- which of the following branches arise from the cerebral part of the internal carotid artery?**

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

Ans: C

**8- which ventricle is not enlarged after blockage of the CSF flow within the cerebral aqueduct of Sylvius?**

- a. Third
- b. Fourth
- c. Right lateral
- d. Left lateral

Ans: B

**9- concerning the cortical-pontine-cerebellar pathway, which of the following is incorrect?**

- a. The first neuron arises from cerebrum.
- b. The tract crosses the midline to reach the middle cerebellar peduncle.
- c. It is connected to the dentate nucleus
- d. It controls the muscle tone
- e. It is important in learning new movement

Ans: D

**10- and, as regards, the lateral ventricle, which of the following structures is medial to the occipital Horn?**

- a. Hippocampus
- b. Tail of caudate nucleus
- c. Collateral eminence
- d. Calcaravis
- e. Body of caudate nucleus

Ans: D

**11- regarding the blood supply of the brain, which of the following statement is correct?**

- A. Both language areas are supplied by the anterior cerebral artery.
- B. Area 8 is supplied by the anterior cerebral artery
- C. Area 17 is supplied by the middle cerebral artery
- D. Gyrus rectus this is supplied by anterior cerebral artery
- E. Temporal pole is supplied by posterior cerebral artery

Ans: D

## **PHYSIOLOGY**

**1- which of the following statements is not matched?**

- a. retrograde amnesia..... lesion in the thalamus.
- b. prefrontal cortex..... socially disinhibited behavior
- c. basal ganglia lesion.....instability to perform rapid alternating movements
- d. cerebellum lesion..... nystagmus and wide gate (drunken gate)
- e. upper motor neuron lesion ..... Hyperreflexia, fasciculation and fibrillation

Ans: C

**2- rigidity of the axial and antigravity muscles when cortical control over the brain stem is integrated (decerebrate) is due to:**

- a. over activity of rubrospinal tract.
- b. Over activity of medullary reticulospinal tract.
- c. over activity of pontine reticulospinal tract.
- d. disruption of the dorsal spinocerebellar pathway.
- e. disruption of the lateral vestibulospinal tract.

Ans: C

**3- macrostimulation of which of the following would lead to contraction of individual muscle fibers.**

- a. primary motor cortex
- b. premotor cortex

- c. supplementary motor cortex
- d. somatosensory association area of the cortex
- e. the limbic association area

ans: A

**4- the “limb” regions of the motor homunculus are involved in activating motor neurons that move the arms, hands, and legs primarily on the \_\_\_\_\_, and the trunk regions of the motor homunculus are primarily involved in activating motor neurons that move the trunk primarily on the \_\_\_\_\_.**

- a. same side of the body, opposite side of the body
- b. opposite side of the body, opposite side of the body
- c. same side of the body, same side of the body
- d. opposite side of the body, opposite side of the body
- e. both sides of the body, both sides of the body

ans: D

**5- A 70 year old man with a history of hypertension went to work and had sudden onset of nausea and vomiting. He was taken to ER, where his exam was notable for slurred speech (dysarthria), and dysmetria on finger-to-nose testing on the left side. His gait was normal with normal equilibrium. Where is the lesion?**

- a. cerebellar vermis
- b. right cerebellar hemisphere
- c. left cerebellar hemisphere
- d. fastigial nucleus
- e. vestibular nuclei

ans: C

**6- A 75 year old man gradually presented with left sided tremor especially at rest, and slowness of movement. On clinical examination of this patient the following is TRUE:**

- a. Hypotonia
- b. The patient exhibits a mask face
- c. Power is severely affected
- d. Coma
- e. Vestibular nystagmus

Ans: B

**7- The \_\_\_\_\_ controls the motor orders while the \_\_\_\_\_ compares the intended movement with actual movement for the improvement of movement skill.**

- a. Motor cortex, cerebellum
- b. Cerebellum, basal ganglia
- c. Basal ganglia, motor cortex

- d. Basal ganglia, cerebellum
- e. Cerebellum, red nucleus

Ans:A

**8- 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. Parkinsonism is caused by neuronal degeneration within the substantia nigra
- c. The globes pallidus projects directly to the cerebral cortex
- d. Acetylcholine is the predominant neurotransmitter of the substantia nigra
- e. Chorea is a speech disorder caused by disease of basal ganglia

Ans: B

**9- A person with haemorrhage that affects the internal capsular fibres and hemiplegia and has aphasia, most probably his/her lesion is located at:**

- a. Right cerebral hemisphere
- b. Left cerebral hemisphere
- c. Right thalamus
- d. Left cerebellum hemisphere
- e. Both basal ganglia

Ans: B

**10- Muscle rigidity demonstrated in basal ganglia diseases is caused primarily by:**

- a. A resting high tonic discharge of globes pallidus to thalamus
- b. A resting high tonic discharge of substantia nigra reticulata to thalamus
- c. Disinhibition of thalamus output caused by increased striatal (caudate and putamen) output of globus pallidus
- d. Disinhibition of subthalamic output caused by increased striatal output to globus pallidus
- e. Overstimulation of substantia nigra compacta dopaminergic neurons to striatum

Ans: C

**11- short term memories can involve all of the following processes except:**

- a. Regulation of gene expression
- b. Activation of second messenger system
- c. Modulation of membrane channels
- d. Modulation of transmitter release
- e. Change in the sensitivity of the neuronal circuits

Ans: A

## **MICROBIOLOGY**

**1-A 55-year-old patient presented with a burning pain localized in a band across the trunk where a painful rash appeared a few days ago. Reactivation of one of the following pathogens is most likely to cause the symptoms.**

- a. Herpes simplex virus 1.
- b. Herpes simplex virus 2
- c. Varicella zoster virus
- d. Human immunodeficiency virus
- e. Campylobacter jejuni

Ans: C

**2-which of the following is true regarding immunity in the central nervous system (CNS)?**

- a. Normal lymphocyte count in the cerebrospinal fluid (CSF) is equal to that in the blood
- b. Monocytes are the main immune cells present in the brain parenchyma
- c. The bacterial microbiota in the CSF is important in maturity of the immune system
- d. Immune cells can infiltrate the brain parenchyma following brain injury
- e. The brain is rich in resident neutrophils, called microglia

Ans: D

**3-a 40-year-old male presented to the emergency department with severe headache and fever of a few hours duration. On physical examination, The patient had a stiff neck, and a positive kernig's sign. No signs of focal neurological deficit were present. Which of the following tests should be ordered first?**

- a. CSF analysis
- b. Blood culture
- c. Brain magnetic resonance imaging, MRI
- d. Brain computed tomography CT
- e. Tetanus immunity test

Ans: A

**4-which of the following pathogens should be considered first in a case of meningitis in a four week old baby?**

- a. Group A streptococcus
- b. Escherichia coli
- c. Streptococcus pneumonia
- d. Neisseria meningitidis
- e. Staphylococcus aureus

Ans: B

## **BIOCHEMISTRY**

**1-hydrobiopterin (in either form, di- or tetra-) is not needed for the synthesis of the following neurotransmitter:**

- a. dopamine.
- b. Epinephrine
- c. Nitric oxide
- d. Gamma aminobutyric acid
- e. Serotonin

Ans: D

**2-the levels of this neurotransmitter are NOT affected when the vesicular monoamine transporter is blocked**

- a. Dopamine.
- b. Norepinephrine
- c. Gamma aminobutyric acid
- d. Histamine
- e. Serotonin

Ans: C

## **PATHOLOGY**

**1-Choose the incorrect combination:**

- a. Guillain-Barre syndrome and viral infection.
- b. Multiple sclerosis and grey matter plaques
- c. Central pontine myelinolysis and rapid correction of hyponatremia
- d. Amyloid angiopathy and brain hemorrhage
- e. Neuromyelitis Optica and humoral immunity

Ans: B

**2-which of the following statements is incorrect regarding stroke?**

- a. Occlusion of the middle cerebral artery is the most common cause of strokes.
- b. Ischemic stroke results in liquefactive necrosis
- c. Hemorrhagic strokes can result as a complication of hypertension
- d. TIA (transient Ischemic attacks) can precede full blown Ischemic stroke and hence should be treated promptly
- e. Thrombotic strokes are commoner than embolic strokes

Ans: E

**3-which of the following is not a complication of transtentorial herniation?**

- a. Duret hemorrhage



- b. Ischemia of the visual cortex
- c. Third cranial nerve compression
- d. Compression of the anterior cerebral artery
- e. Impaired ocular movement on the side of the Lesion

Ans: D

**4-which of the following statements is incorrect regarding peripheral neuropathies?**

- a. The most common cause of generalized peripheral neuropathy is diabetic neuropathy.
- b. Ischemia is thought to play a role in the pathogenesis of diabetic neuropathy
- c. Hypertrophic neuropathy reflects a chronic demyelinating disease and is characterized microscopically by onion bulb appearance
- d. Guillian barre syndrome is a neuropathy, characterized by an acute, asymmetric, descending muscle weakness
- e. Chronic inflammatory demyelinating polyneuropathy the occurs in association with autoimmune diseases and an AIDS patients

Ans: D

**5-which of the following is not characteristic of epidural haemorrhage?**

- a. Usually not associated with a fracture.
- b. Usually middle meningeal artery is torn.
- c. Blood accumulate under arterial pressure, and dissects the Dura.
- d. Biconvex shape on CT scan
- e. Brain parenchyma is compressed by the bleeding

Ans: A

**6- which of the following is incorrect regarding Multiple Sclerosis?**

- a. T-helper 17 plays a major role in its pathogenesis.
- b. Oligoclonal bands are used as a diagnostic tests
- c. secondary axonal damage can be permanent
- d. Quiescent plaques show inflammation and Myelin destruction
- e. The disease is commoner in female

Ans: D

## **BEHAVIOURAL**

**1-Which of the following is true about intelligence?**

- a. Intelligence changes significantly overtime
- b. Intelligence difference between sexes is significant
- c. Intelligence is not inherited
- d. the difference in intelligence is intraracial
- e. Good education increases intelligence significantly

Ans: D

**2- which of the following statements is true about Wechsler intelligence scale?**

- a. It is a group test.
- b. Has moderate validity
- c. Has 6 verbal and 5 performance skills
- d. Minority of people score between 70 and 110
- e. It is no more used to assess intelligence

Ans: C

**3- explaining behaviour according to neurotransmitters, belongs to which of the following the schools?**

- a. Behavioural school.
- b. Biological school
- c. Psychoanalytic school
- d. Evolutionary school
- e. Developmental school

Ans: B

**4- which of the following statements is an example of 'intrinsic motivation'?**

- a. Competing in a contest to win a scholarship.
- b. Participating in a sport to obtain a medal
- c. Working extra hours to be rewarded with money
- d. Studying hard to achieve high marks
- e. Watching a football game for enjoyment

Ans: E

**5- which of the following is not a common type of conflict?**

- a. A man versus man.
- b. A man versus nature
- c. A man versus himself
- d. A man versus rock
- e. A man versus society

Ans: D

**6- which of the following is correct definition of psychology?**

- a. Psychology studies behaviour and mental processes
- b. Is the science of studying social problems
- c. Is the science of anatomy of a nervous system
- d. Is the science of physiology of the cerebral hemisphere
- e. Is the study of human societies and cultures

Ans: A

**7- which of the following stages of cognitive development post related by Piaget is not proved?**

- a. Sensory motor stage.
- b. concrete operational stage
- c. Informal operational stage
- d. Formal operational stage
- e. Preoperational stage

Ans: C

## **PHARMACOLOGY (في أسئلة انحدفت)**

**1- which of these is a symptom of alcohol use disorder?**

- a. giving up or cutting back on important social work or recreational activities because of alcohol use
- b. Drinking in situations that are physically dangerous, such as while driving a car
- c. Continuing to drink, despite problems with other people brought on by drinking
- d. All of the above
- e. None of the above

Ans: D

**2- alcohol use disorder increases your risk for:**

- a. Cancer.
- b. Pancreatitis
- c. Liver damage
- d. All of the above
- e. None of the above

Ans: D

**3- what are the main enzyme systems for catalysing ethanol to acetaldehyde? المعظم جاوب**

**C**

- a. Alcohol dehydrogenase (ADH)
- b. Alcohol catalyse
- c. Alcohol dehydrogenase (ADH), cytochrome P4502E1 (CYP2E1), catalase
- d. Cytochrome P4502E1 (CYP2E1)
- e. Alcohol decarboxylase

Ans: A

**4- which of the following stages of anaesthesia, surgical operation should be performed?**

- a. Stage I
- b. Stage II
- c. Stage III
- d. Stage IV
- e. Stage V

Ans: D

**5- In a national bee spelling contest, one of the contestants blanked out for a few minutes because she forgot the letters of the word she said before without hesitancy the judges noticed a subtle movement in her both hands she was later admitted to the emergency room, and diagnosed with absence seizure What is the drug of choice?**

- a. Phenytoin
- b. Ethosuximide
- c. Thiopental
- d. Lorazepam
- e. Diazepam

Ans: B

**6- hangover on awakening is a side-effect that linked more with which of the following agents?**

- a. Temazepam
- b. Triazolam
- c. Buspirone
- d. Zolpidem
- e. Flurazepam

Ans: E

**7- which of the following morphine effect is not subjected to tolerance with long-term usage?**

- a. Analgesia.
- b. Respiratory depression
- c. Euphoria
- d. Relaxation and sleep
- e. Constipation

Ans: E

**8- which of the following narcotic is the most suitable drug to reduce intraoperation pain?**

- a. Fentanyl.

- b. Morphine
- c. Codeine
- d. Hydromorphone
- e. Tramadol

Ans: A

**9- which of the following agent is preferring to be used in terminating status epilepticus?**

- a. Flumazinel
- b. Gabapentin
- c. Diazepam
- d. Hydromorphone
- e. Tramadol

Ans: C

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