

CNS

Mid-Exam Past paper



Anatomy:

1) a patient suffering from lower back pain presented with anterolateral sensory impairment in his foot and couldn't stand on his toes when he was asked to, which of the following nerves is most likely to be affected by his condition?

A- L4

B- S1

C- L5

D- L3

E- S2

Ans: B

2) which of the following is WRONG regarding upper motor neurons lesions

A- decorticate lesions located above the red nucleus

B- A positive babinsky sign in a 11 months old is pathological

C- decerebrate lesions have worse prognosis than decorticate.

D- in both lesions lower extremities are spastic and extended.

Ans: B

3) Which of the following is false in regard to brain stem?

Ans: Hypoglossal nerve imerges between Olivary nucleus & inferior cerebellar peduncle

4) Which of the following is wrong?

Ans: superior salivary nucleus supplies parotid gland.

5) False statements regarding CNS blood supply:

A- Anterior spinal artery is branched from the basilar artery.

B- Posterior spinal artery is branched from posterior cerebral artery.

Ans: A

6) About section in pons at the level of inferior colliculus, which of the following statements is incorrect:

Ans: Corticospinal tract is posterior to substantia nigra

7) which of the following nuclei can't founded at the floor of fourth ventricle:

Ans: spinal nucleus of trigeminal nerve

Physiology:

1) Which of the following sensations is mainly conducted through type C nerve fibers?

- A- pressure
- B- vibration (high)
- C- vibration (low)
- D- tickle
- E- touch

Ans: D

2) A 66-year-old patient experienced sudden Right-side weakness, imaging showed an ischemic stroke affecting his left somatosensory area, which of the following is most likely for him to experience:

- A- loss of touch, pain, temperature, vibration, proprioception sensations in the right side
- B- loss of touch, vibration, proprioception sensations in the right side and pain and temperature sensations in the left side
- C- loss of touch, vibration, proprioception sensations in the left side and pain and temperature sensations in the right side
- D- loss of touch, pain, temperature, vibration, proprioception sensations in the left side
- E- bilateral loss of all sensations in the upper limbs but the lower limbs are spared

Ans: A

3) 70 years old suffers from a visual impairment where he can't see the central area, which of the following is most likely to be the cause for his impairment.

- a- cataract
- b- impaired accommodation due to aging
- c- elongated eyeball leading to light convergence before the retina.
- d- degenerative changes in the macula

Ans: D

- 4) which of the following best describes somatic sensations?
- a) The smaller the receptive field, the greater the discriminative ability
 - b) Stimuli of the same intensity always result in receptor potentials of the same magnitude in the same receptor.
 - c) labeled line principle is related to the intensity of a stimulus.
 - d) Lateral inhibition means when type of receptor specialized to response one type of stimulus.
 - e) Any stimulus of sensory receptor will be transmitted to the CNS

Ans: A

- 5) True regarding gustation:
- a) Bitter taste has highest threshold.
 - b) Taste buds exist in other places than tongue, as pharynx
 - c) Sensitivity of taste increases with aging
 - d) Loss of taste during flu is due to destruction in taste buds on tongue.
 - e) Injury to the facial nerve causes complete loss of taste.

Ans: B

- 6) A patient with recurrent substernal chest pain for the last year, dull in nature, cardiac causes excluded, which of is considered as a true explanation about the case?
- a) Visceral pain from Lung parenchyma
 - b) stimulation of the somatic nociceptors in the partial pleura
 - c) Visceral pain from the Esophagus
 - d) Opioids usage increases the pain.
 - e) Inflammatory mediators increase the threshold of pain

Ans: C

- 7) While examining a patient a patellar tendon reflex, a stretch reflex, which of the following is activated in this test?
- a) Golgi tendon organ
 - b) Nociceptors
 - c) Excitation of interneuron
 - d) Activation for static fibers without dynamic
 - e) Stimulation of alpha & gamma motor neurons

Ans: E

8) True regarding vision:

- a) Ciliary muscles are relaxed, suspensory ligaments are tensed.
- b) More aqueous humor is produced than absorbed.
- c) Contraction of radial muscle cause pupil constriction
- d) Fovea has the best accuracy because the high density of rods & cons.
- e) Lens contributes more than any part at refractive power.

Ans: A

9) A patient that has history of occupational noise exposure & difficulty in hearing, appeared that he has sensory neural hearing loss, audio gram test applied to the patient showed a significant loss of hearing at high frequency levels of sound, this due to?

- a) Inflammation in middle ear
- b) Impairment of tympanic membrane
- c) Problem in the base of basilar membrane
- d) Destruction in auditory association area
- e) Attenuation reflex causes this type of sensory loss.

Ans: C

10) Regarding Vestibular system, the true statement?

- a) Hair cells within copula detect linear motion.
- b) when head rotate cilia rotate to opposite direction
- c) Utricle and saccule detect rotational movement.
- d) Otolithics is fluid filled areas.
- e) Destruction of vestibular apparatus causes loss of balance mainly when eyes are opened.

Ans: B

11) True regarding olfaction?

- a) Lesion in thalamus leads to complete loss of smell.
- b) Olfactory receptor cells are special cells communicate with 1st order neuron.
- c) Processing of salivation in response to smell mainly in medial olfactory area
- d) Any volatile substance activates olfactory receptors.
- e) Olfactory receptor cannot regenerate.

Ans: D

12) True statement about thermal sensation:

- a) The small area the better thermal sensation
- b) Thermal sensation response markedly to change in temperature than steady state.
- c) Warm signals are transmitted by A-delta fibers
- d) The number of warm receptors is more than cold
- e) Transduction of warm through TRPM8

Ans: B

Pharmacology:

1. A 25 years old young lady suffering of migraine, which of the following is the first line of treatment in this case?

- a) serotonin antagonist
- b) atenolol
- c) serotonin agonists
- d) Beta blockers

Ans: C

2. A patient with Alzheimer's experiencing wearing off syndrome which of the following medications can be used ?

- a) increasing dopamine
- b) anti-cholinesterase
- c) Anticholinergic drugs

Ans: B

3. an anesthesiologist wants to use a fast anesthetic with short induction time Which of the following is a suitable option:

- A-nitrous oxide
- B-propofol

Ans: B

4. a young woman had a dental procedure to extract a molar, which of the following is the local anesthetic used by the dentist

- a) nitrous oxide
- b) propofol
- c) Marcaine

Ans: C

5. Patient suffering from Catalepsy, the drug of choice is

Ans: dextroamphetamine

6. a patient suffering from epilepsy and not responsive to the current traditional medications, which of the following drugs can be used in this case :

- A- Cl- channel blocker
- B- GABA reuptake inhibitors
- C- GABA antagonists
- D- glutamate agonists

Ans :B

7. best choice of drugs for Parkinson's patients

Answer :Levodopa/carbidopa

Microbiology:

1) A man presented to the ER with meningitis symptoms which of the following symptoms is not associated with higher mortality?

- A- positive Kernig's sign
- B- delayed antibiotics administration
- C- cranial nerves palsy
- D- seizures
- E- altered consciousness

Ans : A

2) which of the following organisms is most likely to cause meningitis in a 2-week infant (الصبيغة ما كانت هيك)

- A - E coli
- B – strep pyogenes
- C - strep pneumoniae

Ans: A

Biochemistry:

1) Which of the following is considered as termination pathway in vision?

- a) α -GTP bind to cGMP phosphodiesterase
- b) Ca^{+2} and calmodulin complex binding to Na^{+} channels

Ans: B

2) Inhibition of ATPase in entering vesicles result in:

- a) Accumulation of neurotransmitters in cytosol
- b) Inhibition of neurotransmitters transporting

Ans: B

Pathology:

1) Which of the following is false regarding berry aneurysm (2 answers are true):

- a) Most common cause of subdural hemorrhage
- b) Mainly occurs in posterior circulation

2) True regarding Guillian Barre syndrome:

- a) Associate with autoimmune disease
- b) Asymmetric neuromuscular paralysis
- c) may cause respiratory difficulty

Ans: C

3) Which of the following is wrong regarding CNS myeline diseases:

Ans: MS is associated with gray plaque

4) A case for some one having a stroke the most common cause:

- a) Thrombi – middle cerebral artery
- b) Emboli – middle meningeal artery
- c) Emboli – middle cerebral artery
- d) Thrombi- middle meningeal artery

Ans: C

Behavior:

- 1) Which of the following is true regarding stress?
- a) Stress is originally a term used in psychology
 - b) Glutamate is a neurotransmitter used in stress physiology
 - c) Stress contributes to the onset of physical & psychological disorders

Ans: c / past paper

- 2) True statement regarding intelligence?
- a) It changes over time while growing
 - b) People score between 90-110 in Wechsler scale
 - c) Environment has no affect on it

Ans: b / past paper

- 3) Correct definition for psychology?

Ans: (past paper) Psychology studies behavior & mental processes

- 4) Which of the following is considered as negative reinforcement:
- a) When the rat presses the button a noise scream start
 - b) Pressing the button, the electronic shock stops
 - c) When the rat presses the button, the electrical shock appears

Ans : b

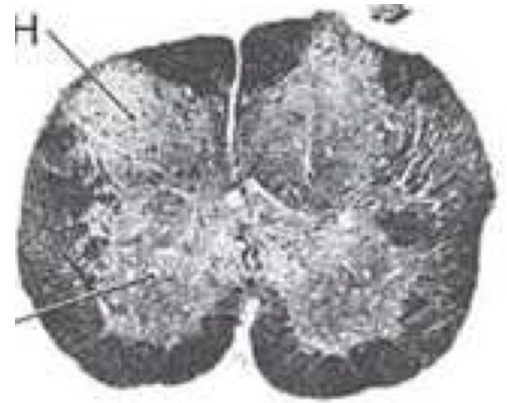
- 5) Which of the following statements regarding personality is correct:
- a) Objective personality test assesses unconscious personality aspects.
 - b) Frued considered that it is composed of two parts the ego & superego.
 - c) Roger studied personality through self-actualization.
 - d) Personality of human changes over time
 - e) Trait theory emphasizes the role of neurodevelopment.

Ans: C

Lab:

1) This section is from:

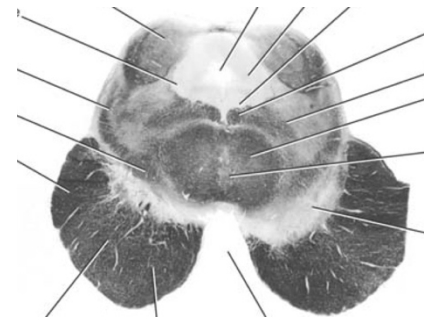
- a) L1
- b) T3
- c) S3



Ans: c

2) This section represents:

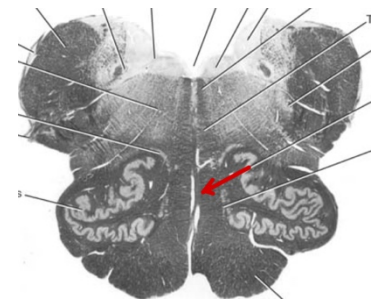
- a) Midbrain superior colliculus
- b) Pons
- c) Medulla oblongata Olivary nucleus
- d) Midbrain Inferior colliculus



Ans: d

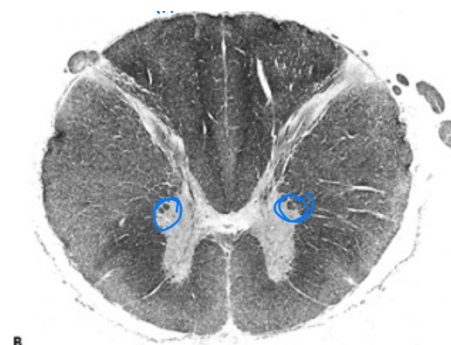
3) Damage to this area affects which of the following?

Ans: medial lemniscus/loss of pain, temperature, proprioception in right side.



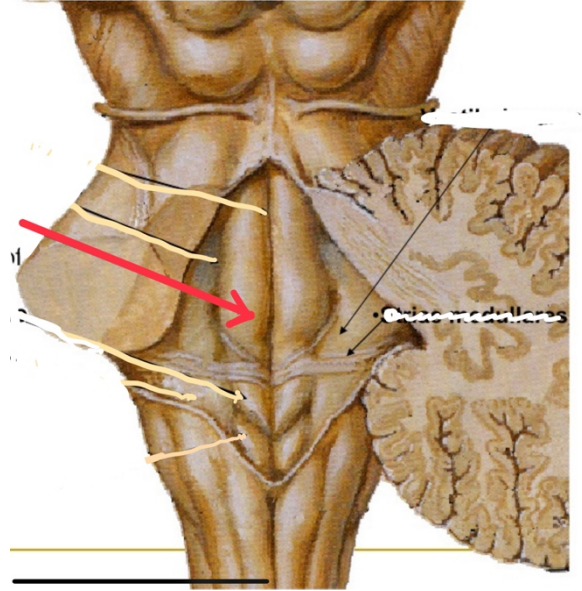
4) This area contains?

Ans: preganglionic sympathetic cell bodies



5) Identify the marked structure:

Answer: facial colliculus



إن نُصرة المستضعف والمظلوم واجب شرعي ولو كان مشركًا، فكيف إذا
كان من المسلمين؟

يقول تعالى: ((وَإِنْ أَحَدٌ مِّنَ الْمُشْرِكِينَ اسْتَجَارَكَ فَأَجِرْهُ حَتَّىٰ يَسْمَعَ كَلَامَ
اللَّهِ ثُمَّ أَبْلِغْهُ مَأْمَنَهُ ۚ ذَٰلِكَ بِأَنَّهُمْ قَوْمٌ لَا يَعْلَمُونَ (6))), التوبة

اللهم أنصر الإسلام و أعزّ المسلمين