بسم الله الرحمن الرحيم

Past Papers

MID | Lectures 6-9

﴿إِنِّي تَوَكَّلْتُ عَلَى اللَّهِ رَبِّي وَرَبِّكُمْ ۚ مَّا مِن دَابَّةٍ إِلَّا هُوَ آخِذٌ بِنَاصِيَتِهَا ۚ إِنَّ رَبِّي عَلَىٰ صِرَاطٍ مُّسْتَقِيمٍ﴾

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ANATOMY

Brain stem

Lectures 6-7 :)

Q1. All the following structures Lies beneath the floor of 4th ventricle EXCEPT?

A) Hypoglossal nucleus

B) Dorsal nucleus of vagus

C) Solitary nucleus

D) Inferior olivary nucleus

Ans:D

Q2. Which of the following cavities can be seen at the level of pyramidal decussation?

A) Central canal

B) Fourth ventricle

C) Cerebral aqueduct

D) Lateral ventricle

Ans:A

Q3. Which of the following structures receives taste fibers?

A) Hypoglossal nucleus

B) Vestibular nuclei (medial and inferior)

C) Nucleus ambiguous

D) Dorsal nucleus of vagus.

E) Solitary nucleus (nucleus of tractus solitaries)

Ans:E

Q4. Which of the following structures is composed of ascending fibers from the vestibular nuclei to the motor nuclei of cranial nerves III, IV, and VI?

A) Medial lemniscus

B) Lateral lemniscus

C) Medial longitudinal fasciculus

D) Reticulospinal tract

E) Spinothalamic tract

Ans:C

Q5. The motor nucleus of cranial nerves IX, X, XI is called:

A) Hypoglossal nucleus

B) Solitary nucleus

C) Nucleus ambiguus

D) Dorsal motor nucleus of vagus

E) Spinal nucleus of trigeminal

Ans:C

Q6. Which of the following cavities can be seen at the level of medial lemniscus decussation?

A) Fourth ventricle

B) Central canal

C) Third ventricle

D) Lateral ventricle

E) Cerebral aqueduct

Ans: B

Q7. The most medial and anterior structure of the medulla is:

A) Pyramid

B) Olive

C) Medial lemniscus

D) Inferior cerebellar peduncle

E) Reticular formation

Ans: A

Q8. Regarding a cross-section through the level of olives, choose the WRONG statement:

A) Inferior olivary nucleus is present

B) Hypoglossal nucleus is present

C) Nucleus ambiguus is present

D) Fourth ventricle forms the cavity

E) Pyramidal decussation occurs at this level

Ans: E

Q9. Concerning the medulla oblongata:

A) It extends from pons to spinal cord

B) Contains cardiovascular and respiratory centers

C) Contains nuclei of cranial nerves IX, X, XI, XII

D) Forms part of the floor of the fourth ventricle

E) All of the above

Ans: E

Q10. The following nuclei are contained in the medulla oblongata EXCEPT:

A) Hypoglossal nucleus

B) Nucleus ambiguus

C) Dorsal motor nucleus of vagus

D) Inferior olivary nucleus

E) Red nucleus

Ans: E

Q11. Regarding cross-section at the level of olive, choose the WRONG statement:

A) Inferior olivary nucleus is prominent

B) Pyramids are present

C) Fourth ventricle is present

D) Hypoglossal nucleus lies near midline

E) Pyramidal decussation occurs

Ans: E

Q12. All of the following statements regarding salivatory nuclei are true EXCEPT:

A) The superior salivatory nucleus provides parasympathetic fibers to the submandibular gland

B) The superior salivatory nucleus is associated with the facial nerve (CN VII)

C) The inferior salivatory nucleus provides parasympathetic fibers to the parotid gland

D) Parasympathetic fibers from the inferior salivatory nucleus pass through the lesser petrosal nerve

E) The superior salivatory nucleus supplies the parotid gland

Ans: E

Q13. All of the following statements regarding the brainstem are true EXCEPT:

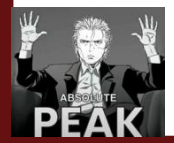
A) The hypoglossal nerve emerges between the pyramid and the olive of the medulla

B) The glossopharyngeal, vagus, and accessory nerves emerge posterior to the olive

C) The inferior cerebellar peduncle is located lateral to the olive

D) The hypoglossal nerve emerges between the olivary nucleus and the inferior cerebellar peduncle

E) The pyramids are located on the anterior surface of the medulla



Ans: D

Q14. Regarding the nuclei of the brainstem, choose the WRONG statement:

A) Spinal nucleus of trigeminal is located in the posteromedial aspect of inferior cerebellar peduncle

B) Mesencephalic nucleus of trigeminal is located lateral to cerebral aqueduct

C) Main sensory nucleus of trigeminal nerve is located lateral to motor nucleus of trigeminal nerve

D) Nucleus ambiguus is located deep in the reticular formation of medulla oblongata

E) The dorsal vagal nucleus is parasympathetic nucleus

Ans: A

Q15. One of the following nerves doesn't exit through the pontomedullary junction?

A) Sensory of facial nerve

B) Motor of facial nerve

C) Abducent nerve

D) Vestibulocochlear

E) Trigeminal

Ans: E

Q16. Which nerve exits from the back of midbrain?

A) Nerve IV

B) Nerve V

C) Nerve II

D) Nerve IX

Ans: A

Q17. Which of the following statements regarding the brainstem is WRONG?

A) The trochlear nerve (CN IV) emerges from the posterior surface of the midbrain.

B) The abducent nerve (CN VI) emerges at the pontomedullary junction near the midline.

C) The hypoglossal nerve (CN XII) emerges between the pyramid and the olive.

D) The glossopharyngeal, vagus, and accessory nerves emerge posterior to the olive.

E) The hypoglossal nerve emerges between the olivary nucleus and the inferior cerebellar peduncle.

Ans: E

Q18) The anterolateral sulcus of the medulla between pyramid & olive transmit:

A) Hypoglossal nerve
B) Spinal accessory nerve
C) 9^{th}, 10^{th} and 11^{th} cranial nerves
D) All of the above
E) None of the above

Ans: A

Brain stem

Lectures 8-9

Q1) Which of the following cranial nerves emerges from the posterior aspect of the brainstem?

A) Vestibulocochlear

B) Facial

C) Trochlear

D) Abducent

E) Trigeminal

Ans:C

Q2) Which of the following represents the cavity found in a cross section of Midbrain?

A) Cerebral canal

B) Cerebral aqueduct

C) Fourth ventricle

D) Foramen of Mono

E) Foramen of Luschka.

Ans:B

Q3) One of the following nerves doesn’t exit through the pontomedullary junction?

A) Sensory of facial nerve

B) Motor of facial nerve

C) Abducent nerve

D) Vestibulocochlear

E) Trigeminal

Ans:E

Q4) What separates tegmentum from the basal part in pons?

A) Corticopontine fibers

B) Trapezoid body

C) Motor nucleus of facial nerve

D) Medial lemniscus

E) Pontine nuclei

Ans:B

Q5) Which of the following structures cannot be seen in pons?

A) Spinal nucleus of triageminal

B) Sensory of trigeminal

C) Motor nucleus of vagus

D) Superior cerebellar peduncle

E) Medial lemniscus

Ans:C

Q6) Which nerve exits from the pontomedullary junction?

A) Oculomotor nerve

B) Optic nerve

C) Abducent nerve

D) Trigeminal nerve

Ans:C

Q7) Which nerve exits from the back of Midbrain?

A) Nerve IV

B) Nerve V

C) Nerve II

D) Nerve IX

Ans:A

Q8) Which of the following can be found in the posterior surface of pons?

A) Pyramidal eminence

B) Middle cerebellar peduncle

C) Facial colliculus

D) Superior colliculi

Ans:C

Q9) Which of the following connects inferior colliculus with medial geniculate body?

A) Medial longitudinal fasciculus

B) Lateral lemniscus

C) Medial lemniscus

D) Superior brachium

E) Inferior brachium

Ans:E

Q10) Which 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

Ans:D

Q11) Regarding internal structure of pons, which of the following is located anterior to trapezoid body?

A) Tectum

B) Facial colliculus

C) Tegmentum

D) Basal part

Ans:D

Q12) Which of the following is considered as part of the acoustic pathway?

A) Facial nucleus

B) Trigeminal lemniscus

C) Lateral lemniscus

D) Medial lemniscus

E) Spinal lemniscus

Ans:C

Q13) 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

Ans:B

Q14) Contain descending tracts from the cerebral cortex describes which of the following structures?

A) Tectum

B) Tegmentum

C) Crus cerebri

D) Cerebral aqueduct

Ans: C

Q15) Wrong about pons at the 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

Ans: A

Q16) Choose the wrong statement about parasympathetic:

A) Parotid gland is supplied by nerve from superior salivary nucleus.

B) Lacrimal gland is supplied from nerve from superior lacrimal nucleus

Ans: A

Q17) Which of the following brain stem nuclei supplies parasympathetic stimulation to the submandibular gland?

A) Solitary nucleus

B) Endinger-Westphal nucleus

C) Superior salivatory nucleus

D) Dorsal vagal nucleus

E) Inferior salivatory nucleus

Ans: C

Q18) 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) Spinal nucleus of trigeminal is located on the anteromedial aspect of inferior cerebellar peduncle

D) Facial nucleus is located anterior to the lateral part of the medial lemniscus

E) Medial vestibular nucleus is located lateral to the abducent nucleus

Ans: D

Q19) The superior brachium connects the superior colliculus with the:

A) Hypothalamus
B) Uncus
C) Mammillary body
D) Lateral geniculate body

Ans: D

Q20) Most of the fibers of the lateral lemniscus arise from the:

A) Cochlear nuclei
B) Solitary nucleus
C) Vestibular nuclei
D) Spinal trigeminal nucleus
E) Inferior colliculus

Ans: A

Q21) Lesion in the tegmentum of the pons may damage the following EXCEPT the:

A) Corticopontine fibers
B) Spinal lemniscus
C) Trigeminal lemniscus
D) Medial lemniscus
E) Facial motor nucleus

Ans: A

Q22) Regarding transverse section through caudal part at the pons, which of the following can be seen:

A) Mesencephalic nucleus of trigeminal nerve
B) Motor nucleus of oculomotor nerve
C) Edinger-Westphal nucleus
D) Sensory nucleus that receive pain and temperature from the face

Ans: D

Q23) One of the following can be found inside the midbrain?

A) Central canal
B) Trapezoid body
C) Substantia nigra
D) Motor nucleus of facial nerve
E) Optic chiasm

Ans: C

Q24) The parasympathetic nucleus of oculomotor nerve is located?

A) Pretectal nucleus
B) Superior colliculus
C) Inferior colliculus
D) Edinger-Westphal nucleus
E) Nucleus ambiguous

Ans: D

Q25) All of the following is located posterior to substantia nigra except?

A) Decussation of rubrospinal
B) Frontopontine fibers
C) Red nucleus
D) Nucleus of oculomotor
E) Reticular formation

Ans: B

Q26) Which of the following represents the location of corticospinal fibers in cross section of a midbrain?

A) Substantia nigra
B) Red nucleus
C) Tectum
D) Crus cerebri
E) Tegmentum

Ans: D

Q27) Which of the following structures lies in the midbrain?

A) Optic chiasma
B) Facial colliculus
C) Substantia nigra
D) Basilar groove
E) Pyramidal eminence

Ans: C

Q28) Which of the following cranial nerves is arising from interpeduncular fossa?

A) Optic
B) Olfactory
C) Trigeminal
D) Oculomotor
E) Trochlear

Ans: D

Q29) Regarding a transverse section through the superior colliculus of midbrain, all of the following are true EXCEPT:

A) Mesencephalic nucleus of trigeminal nerve is located lateral to cerebral aqueduct.
B) Medial longitudinal fasciculus is located anterolateral to the motor nucleus of oculomotor nerve.
C) Lateral lemniscus is located posterior to substantia nigra.
D) Red nucleus is situated between cerebral aqueduct and substantia nigra.
E) Frontopontine fibers are located anterior to substantia nigra.

Ans: C

Q30) Regarding a transverse section through the inferior colliculus of midbrain, choose the WRONG statement:

A) Medial and spinal lemnisci are located posterior to substantia nigra.

B) Medial longitudinal fasciculus is located anterolateral to the motor nucleus of trochlear nerve.

C) Temporopontine fibers are located anterior to substantia nigra.

D) Decussation of inferior cerebellar peduncles is anterior to cerebral aqueduct.

E) Mesencephalic nucleus of trigeminal nerve is located lateral to cerebral aqueduct.

Ans: D

Q31) 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

Ans: C

Q32) 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

Ans: C

Q33) Regarding a transverse section through the inferior colliculus of midbrain, choose the Wrong statement:

A) Medial longitudinal fasciculus is located posterolateral to the motor nucleus of trochlear nerve.

B) Temporopontine fibers are located anterior to substantia nigra.

C) Mesencephalic nucleus of trigeminal nerve is located lateral to cerebral aqueduct.

D) Decussation of superior cerebellar peduncle is anterior to cerebral aqueduct.

E) Spinal lemnisci are located posterior to substantia nigra.

Ans: A

Q34) Choose the incorrect pair of (neuron-location of cell body):

A) Upper motor neuron of corticonuclear tract –frontal lobe
B) Preganglionic parasympathetic neuron in oculomotor nerve –hindbrain
C) 3rd order neuron in discriminative touch pathway –thalamus
D) 1st order sensory neuron –dorsal root ganglia
E) 2nd order neuron in the dorsal column pathway –medulla oblongata

Ans: B

Q35) Which of the following statements is (are) correct concerning the third cranial nerve nuclei:

A) The oculomotor nucleus is situated in the central gray matter.

B) The parasympathetic part of the oculomotor nucleus is called the Edinger-Westphal nucleus.

C) The fibers from the oculomotor nucleus pass through the red nucleus.

D) The oculomotor nucleus lies just posterior to the medial longitudinal fasciculus.

E) All of the above.

Ans: E

Q36) Which of the following statements is incorrect concerning the internal structure of the midbrain?

A) The tectum is the part posterior to the cerebral aqueduct.
B) The crus cerebri on each side lies anterior to the substantia nigra.
C) The tegmentum lies posterior to the substantia nigra.
D) The central gray matter encircles the red nuclei.

Ans: D

Q37) Concerning the midbrain:

A) It lies below the diencephalon
B) It occupies the notch (hiatus) of the tentorium cerebelli
C) It has roots of nerves concerned with innervation of the eye muscles
D) All of the above are correct
E) None of the above is correct

Ans: D

Q38) Wrong about trigeminal nerve:

A) It provides general sensory innervation to the face
B) Supplies muscles of mastication
C) Innervates stapedius muscle
D) Has three main divisions

Ans: C

Q39) Wrong about the superior colliculus section:

A) Mesencephalic nucleus of the trigeminal nerve is seen laterally to the cerebral aqueduct.

B) Medial longitudinal fasciculus is located anteromedially to the oculomotor nerve nucleus.

Ans: B

Q40) A 60 years old man with a history of hypertension and smoking brought to neurology clinic. The neurologic examination reveals hemiparesis and loss of proprioception and vibratory sense on the right side of the body and a deviation of the tongue to the left side when it's protruded; This patient is likely suffering from:

A) Benedikt Syndrome
B) Medial medullary syndrome
C) Millard-Gubler syndrome
D) Lateral medullary syndrome
E) Claude syndrome

Ans: B

Q41) 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

Ans: E

Q42) 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

Ans: A

Q43) The union of the two vertebral arteries forms:

A) Basilar artery
B) Anterior spinal artery
C) Posterior cerebral artery
D) Vertebral artery
E) Posterior spinal artery

Ans: A

Q44) 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

Ans: B

Q45) 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
C) Millard-Gubler
D) Benedikt syndrome
E) Weber syndrome

Ans: B

Q46) Tonsillar herniation cause all of the following except:

A) Hypertension
B) Increase in intracranial pressure
C) Hyperventilation
D) Dilation of pupil
E) Decreasing levels of consciousness

Ans: D

Q47) Regarding Foville syndrome, Choose the wrong statement:

A) It causes ipsilateral dilation 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 abducent nerve paralysis

Ans: A

Q48) Occlusion of anterior spinal artery may cause:

A) Foville syndrome
B) Benedikt syndrome
C) Millard-Gubler syndrome
D) Wallenberg syndrome
E) Dejerine syndrome

Ans: E

Q49) 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 dilation of pupil
E) Contralateral hemiparesis

Ans: D

Q50) All of the following are associated with problems in the brain stem

EXCEPT:

A) Dysphagia
B) Visual deficits
C) Respiratory problems
D) Dysphasia
E) Altered equilibrium

Ans: D

Q51) The medial medullary syndrome includes:

A) Contralateral hemiplegia
B) Ipsilateral paralysis of the tongue
C) Contralateral loss of the deep sensations
D) All of the above
E) None of the above

Ans: D

Q52) The medial medullary syndrome is caused by damage of the:

A) Corticospinal, corticobulbar and corticopontine fibers.
B) Corticospinal tract and oculomotor nerve.
C) Corticospinal tract, medial lemniscus and hypoglossal nerve.
D) Corticospinal tract and abducent nerve.
E) Crus cerebri and oculomotor nerve.

Ans: C

Q53) Paralysis of the right upper and lower limbs with paralysis of the left lateral rectus muscle suggest lesion in the:

A) Right medulla.
B) Left medulla
C) Right pons.
D) Left pons
E) Right crus cerebri.

Ans: D

Q54) An MRI of vessels showed occlusion of vessels in the medial portion of the midbrain on the right side involving oculomotor nerve and crus cerebri. This patient is most likely not suffering of which of the following:

A) Deviation of the tongue to the left side when protruded
B) Paralysis of extremities on the left side
C) Loss of pain and thermal sensation on the right thermal side of the face
D) Dilation of the pupil
E) Weakness of lower facial muscles

Ans: C

Q55) A 65 years old man with history of hypertension and smoking went to neurologic clinic, the neurological 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. Which of the following is he suffering from?

A) Brown-Sequard syndrome
B) Medial medullary syndrome
C) Lateral medullary syndrome
D) Central pontine myelinolysis

Ans: C

Q56) 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:

A) Left pons
B) Right medulla
C) Left medulla
D) Right midbrain

Ans: B

Q57) Occlusion of the vessels serving the central area of the midbrain on the right-side causes all of the following except:

A) Paralysis of most eye movement of the left eye
B) Dilation of the pupil of the right eye
C) Left-sided ataxia
D) Tremor
E) Incoordination

Ans: A

Q58) Tumor on the pontine part of the 4th ventricle, affect:

A) Smell
B) Smiling
C) Respiration

As it affects the facial nerve nucleus in the pons Ans: B

Q59) The principle trigeminal nucleus receives:

A) The pain fibers of the trigeminal nerve
B) The temperature fibers of the trigeminal nerve
C) The taste fibers of the facial nerve
D) The discriminative touch fibers of the trigeminal nerve

Ans: D

Q60) The following cranial nerves have parasympathetic functions except:

A) X
B) IX
C) VII
D) V
E) III

Ans: D

Q61) The cranial nerve does not contain parasympathetic nuclei:

A) 3^{rd}

B) 7^{th}

C) 9^{th}

D) 10^{th}

E) 11^{th}

Ans: E

Q62) All of the following can be seen in a cranial section of the pons except:

A) Medial longitudinal fasciculus
B) 4th ventricle
C) Medial lemniscus
D) Trapezoid body
E) Spinal nucleus of trigeminal

Ans: E

Q63) In a section of the midbrain at the level of inferior colliculus, which statement is wrong:

A) Decussation of superior cerebellar peduncle is found at this level
B) Trochlear nerve nucleus is found at this level
C) Corticospinal tract is posterior to substantia nigra

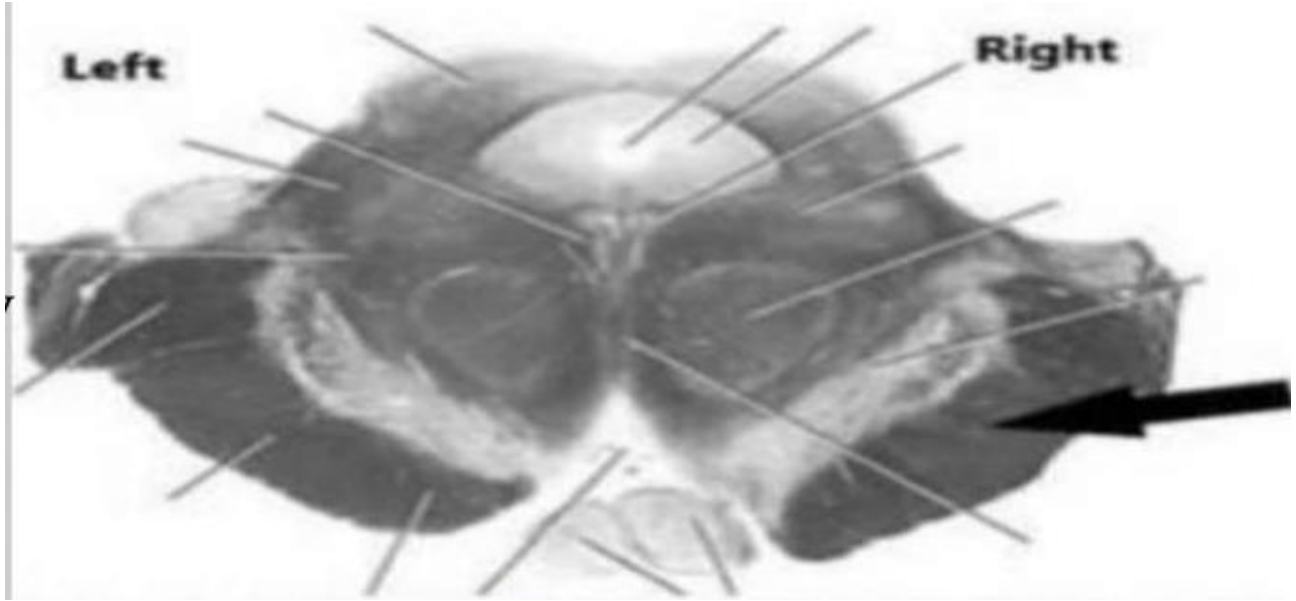
Ans: C

Brain stem

Lab

Q1) The pointed area contains mainly:

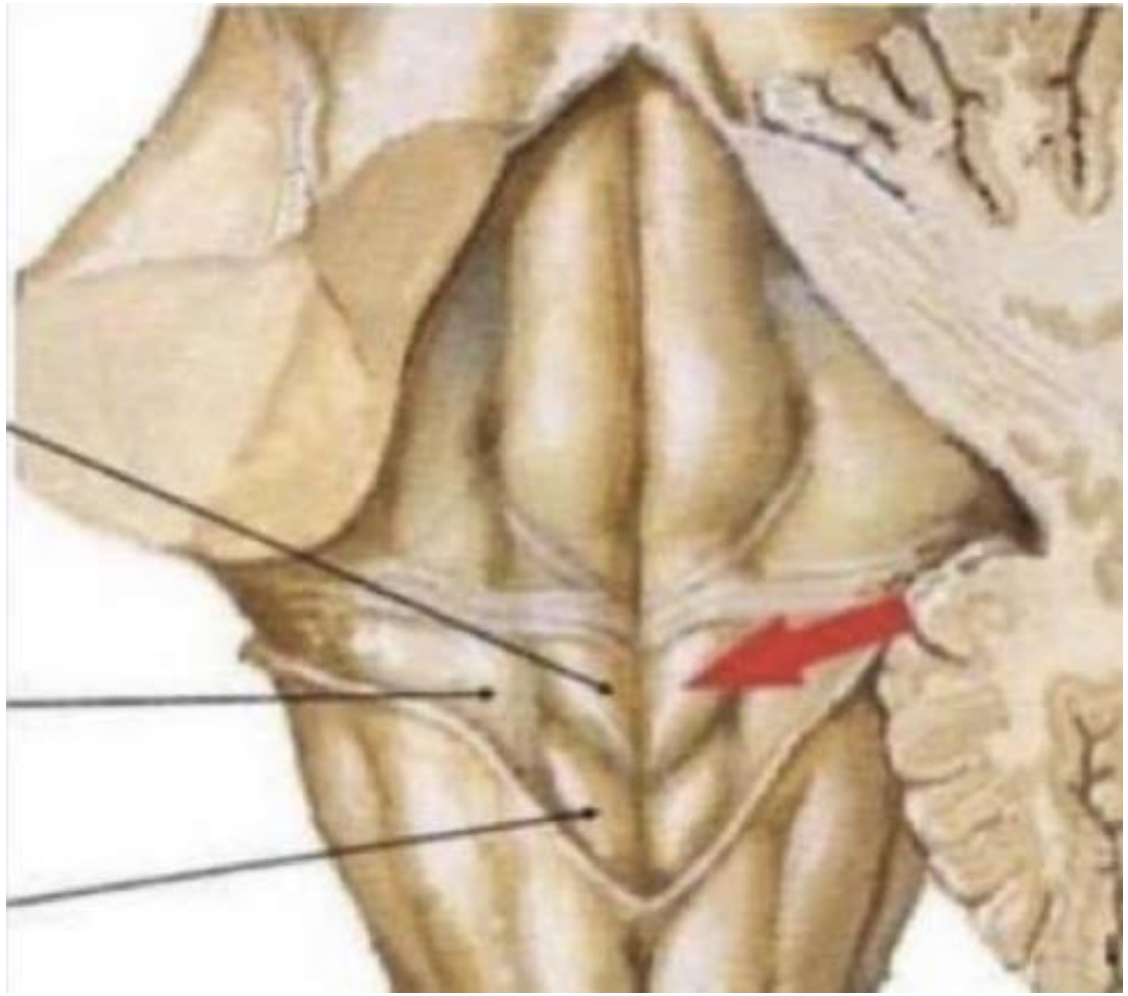
A) Right pyramid
B) Proprioceptive fibers from right side of body
C) Corticospinal fibers that control right side of body
D) Proprioceptive fibers from left side of body
E) Corticospinal fibers that control left side of body



Ans: E

Q2) The pointed structure (red) is:

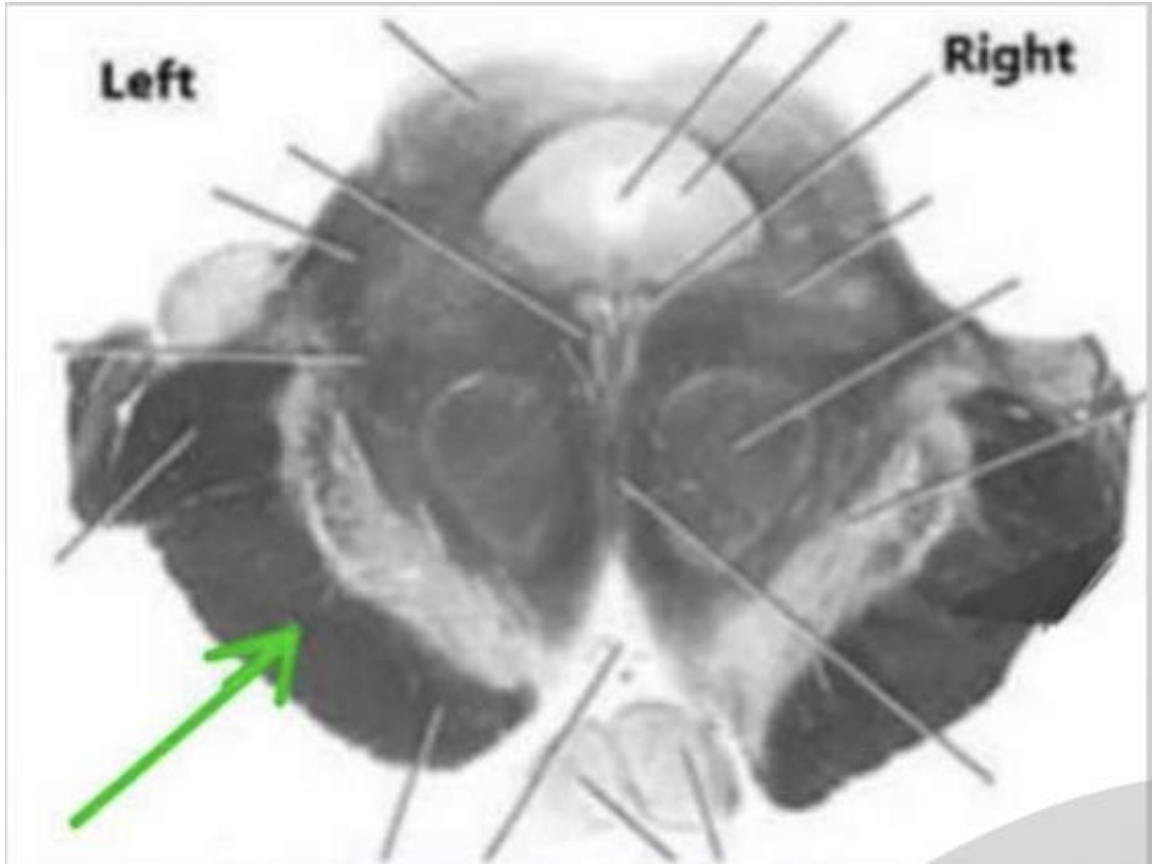
A) Hypoglossal triangle
B) Medial eminence
C) Facial colliculus
D) Vagal triangle
E) Vestibular area



Ans: A

Q3) The pointed area contains mainly:

A) Right pyramid
B) Proprioceptive fibers from right side of body
C) Corticospinal fibers that control right side of body
D) Proprioceptive fibers from left side of body
E) Corticospinal fibers that control left side of body

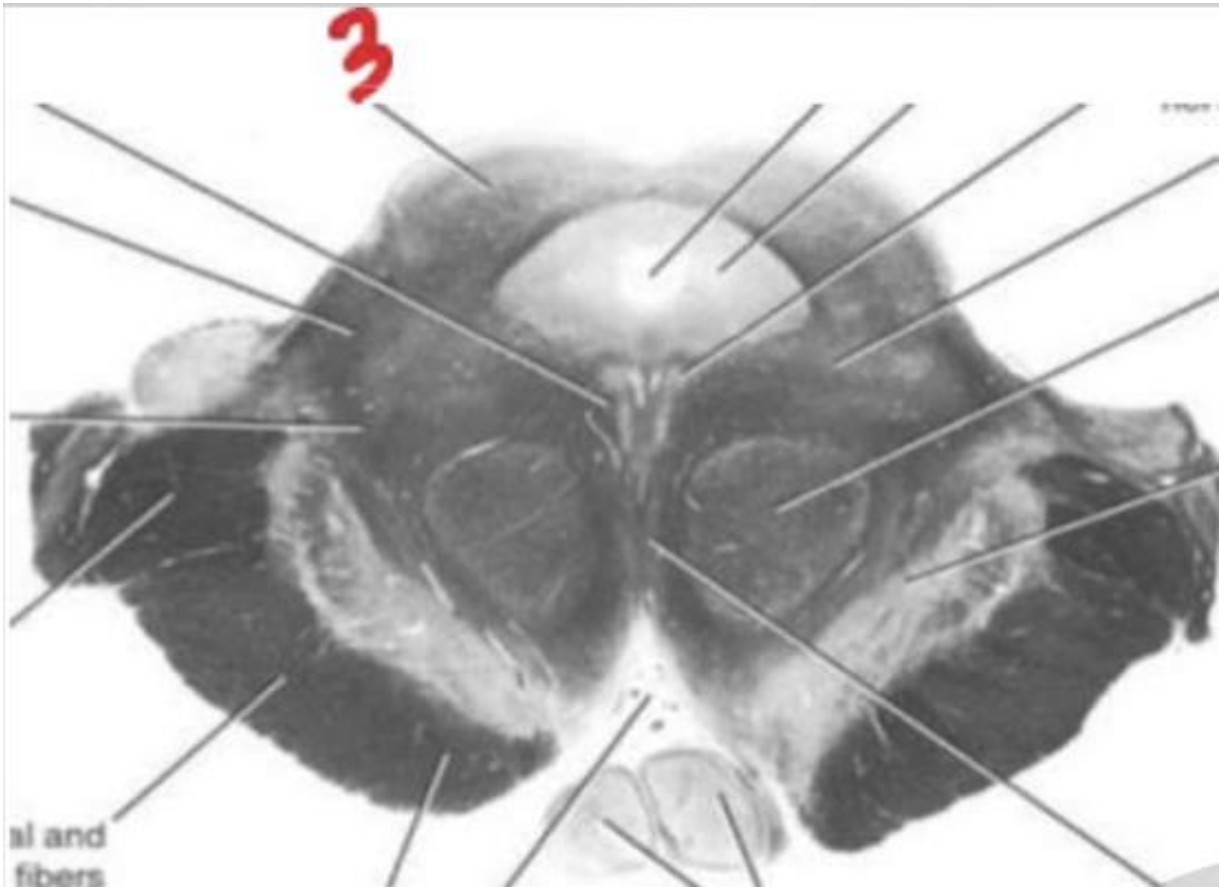


Ans: C

Q4) Number 3 refers to:

A) Red nucleus

B) Superior colliculus

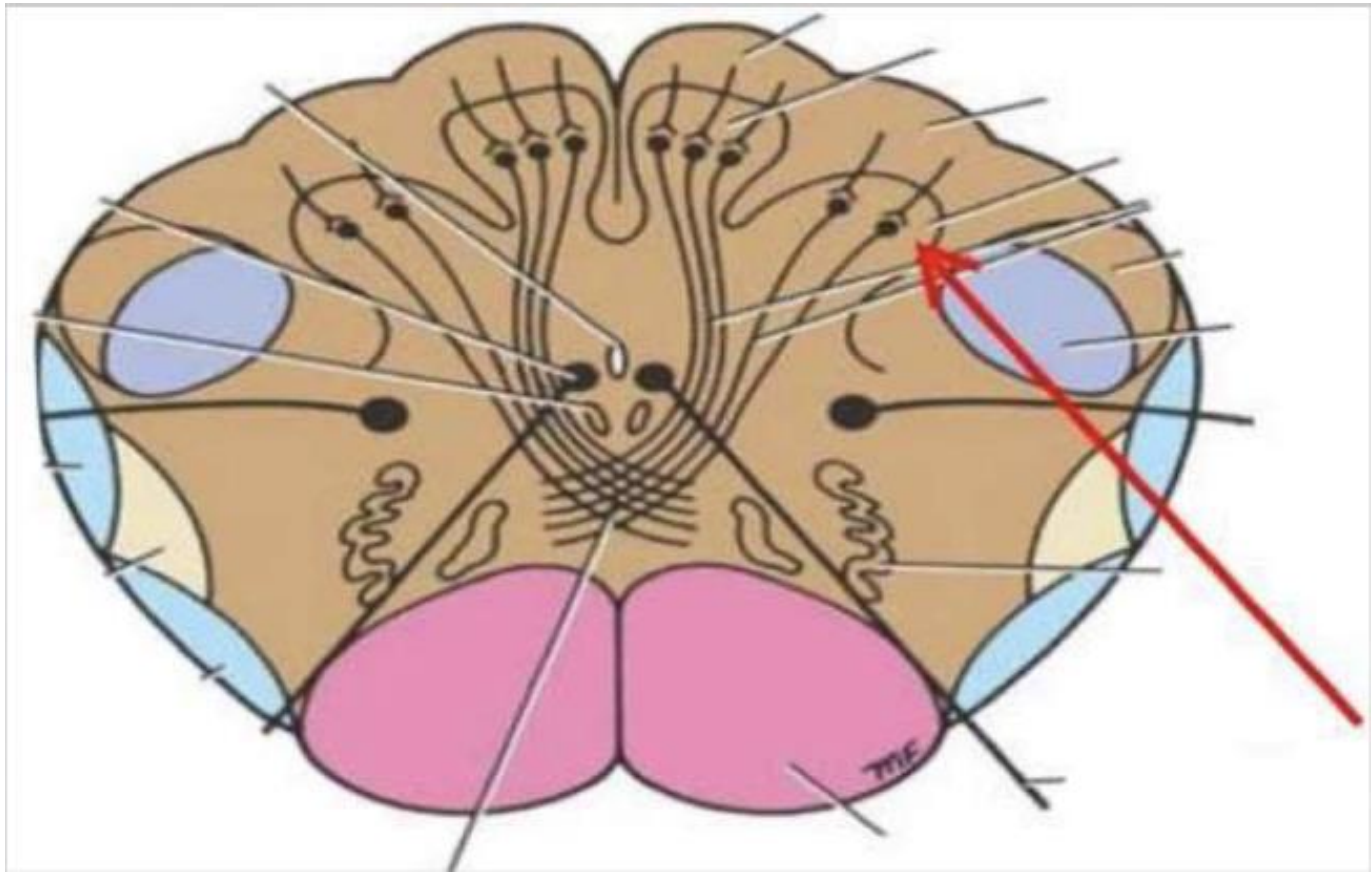


Ans: B

Q5) The red arrow refers to:

A) Nucleus cuneatus

B) Nucleus grasilus

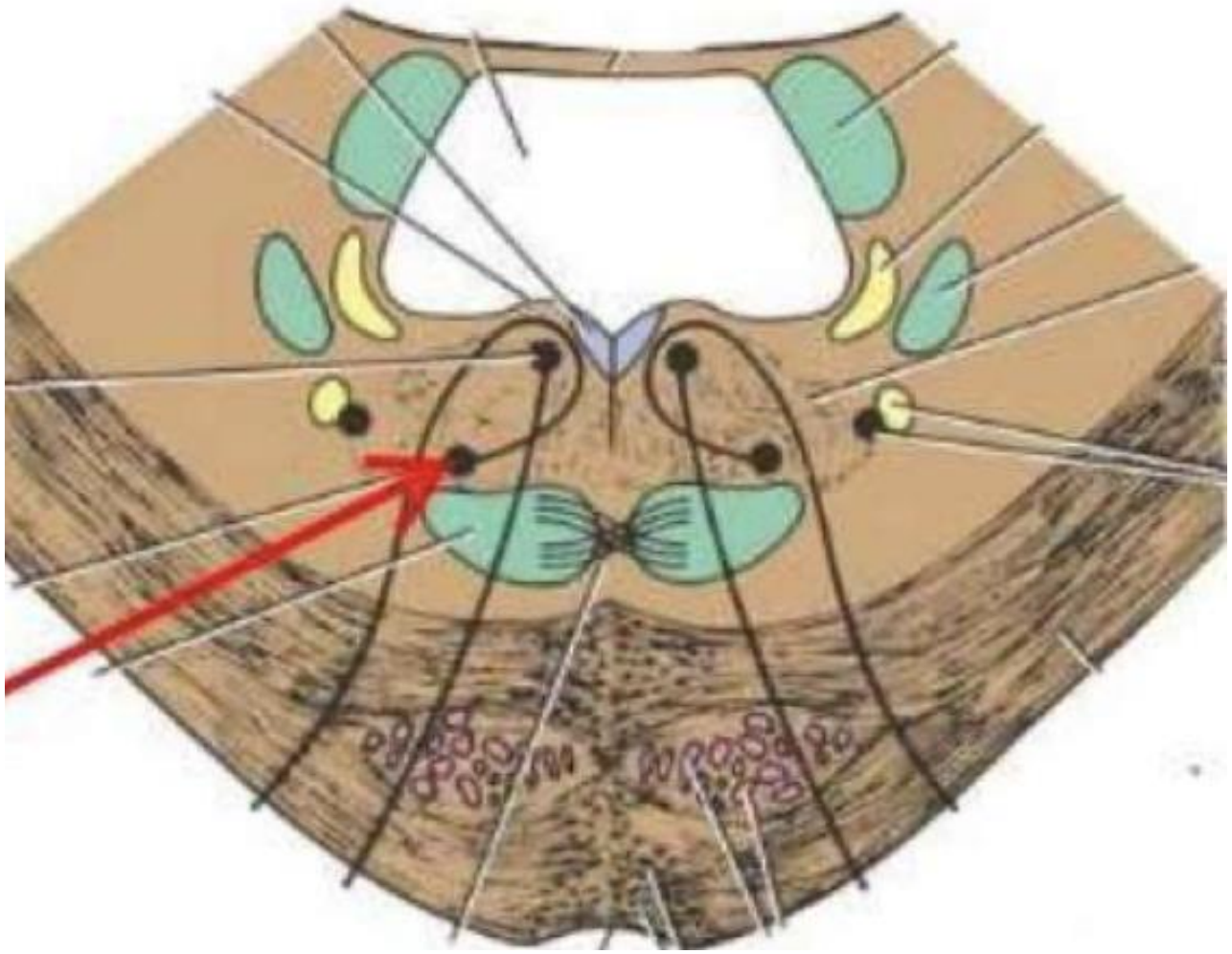


Ans: A

Q6) The red arrow refers to:

A) Medial lemniscus

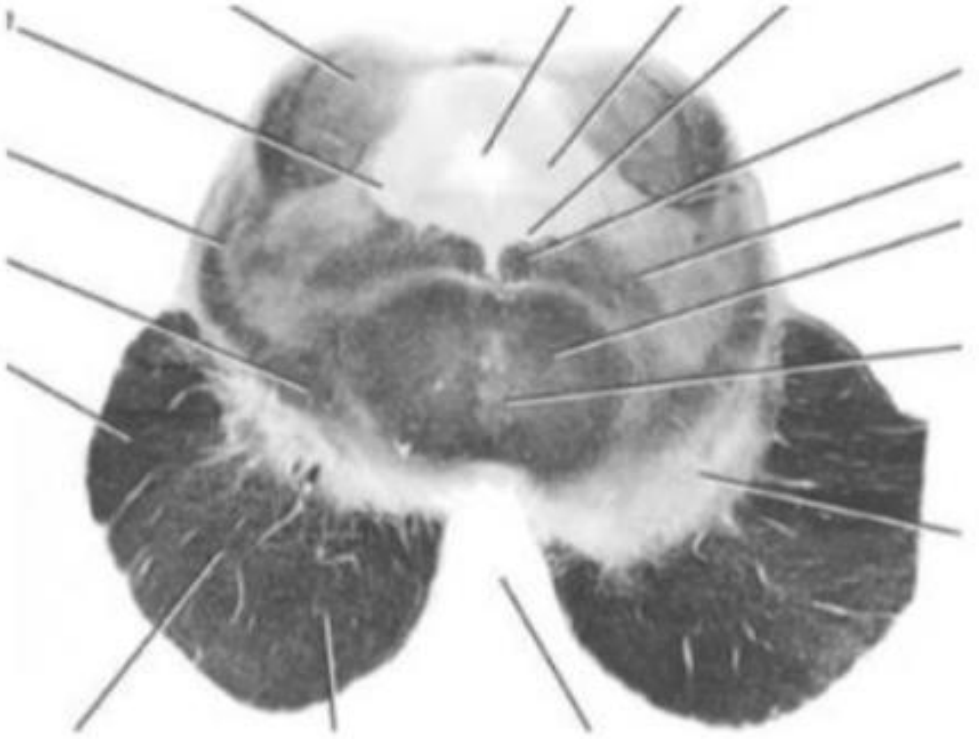
B) Facial nucleus



Ans: B

Q7) This section was taken at the level of:

A) Inferior colliculus
B) Superior colliculus
C) Middle colliculus
D) None of the above

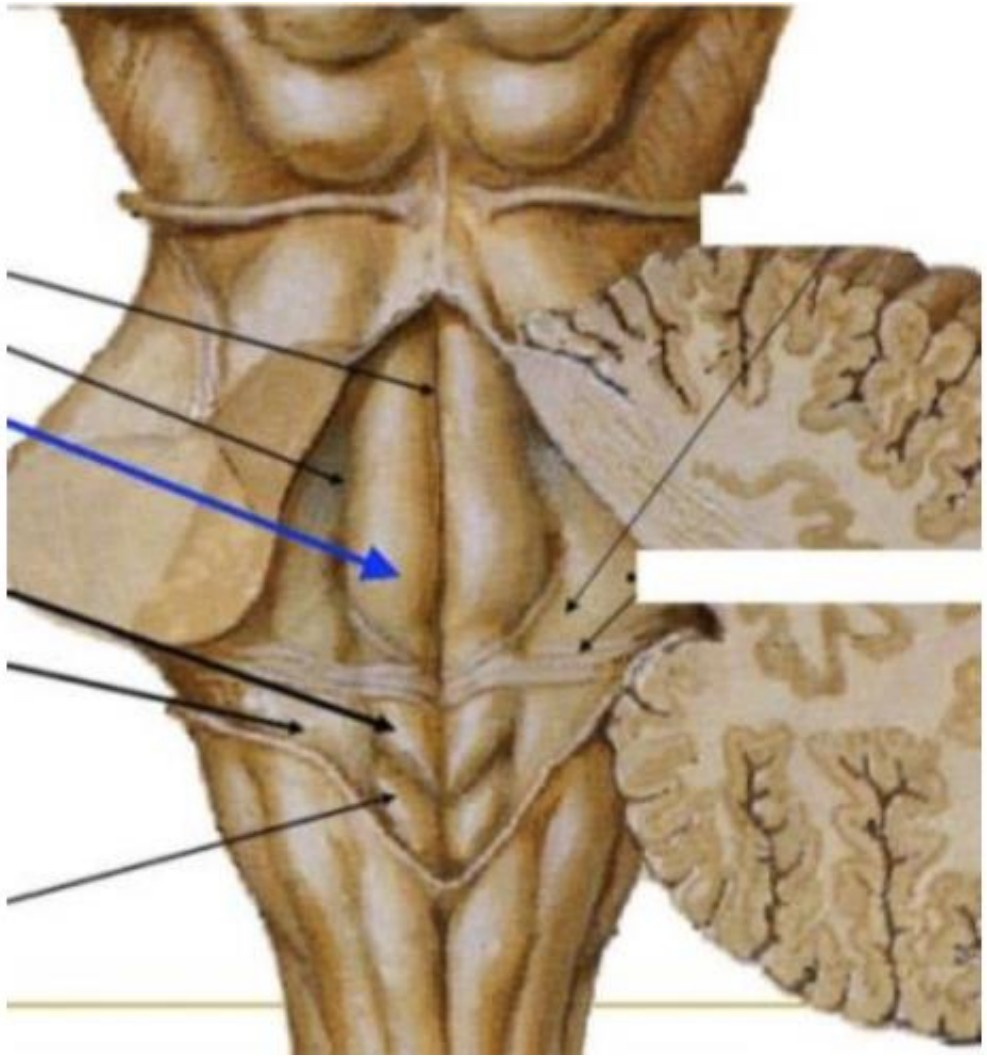


Ans: A

Q8) The pointed structure is:

A) Area vestibuli

B) Facial colliculus

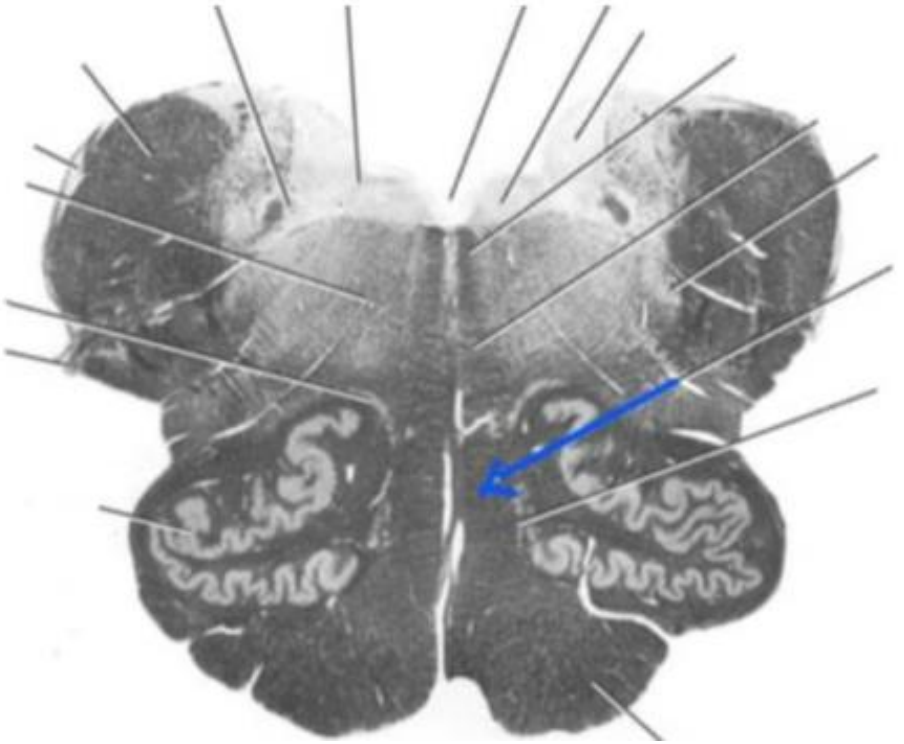


Ans: B

Q9) Damage to this area causes which of the following:

A) Loss of pain and temperature on the right side of the face

B) Loss of vibration sense and proprioception contralaterally.



Ans: B

رسالة من الفريق العلمي

اللهم إن عمر عطية في ذمتك وحبل جوارك، فقِه من فتنة القبر وعذاب النار، أنت أهل الوفاء والحق، فاغفر له وارحمه إنك أنت الغفور الرحيم.

اللَّهُمَّ علِّمنا مَا يَنفَعنا وانفَعنا بِما عَلَّمتنا وزِدنا عِلمًا يَا رب **"سُبحانَك لا عِلم لَنا إلَّا مَا علَّمتَنا إنَّك أنتَ العَليمُ الحَكيمُ"**

يعطيكم العافية :)

For any feedback, scan the code or click on

Corrections from previous versions:

Versions	Slide # and Place of Error	Before Correction	After Correction
V0 → V1			
V1 → V2			