Lecture #03 Brainstem

Question 1: Ipsilateral paralysis of all muscles of facial expression is a common complication of which?

a) Medial medullary syndrome

b) Ventral syndrome of the midbrain

c) Lateral medullary syndrome

d) Stroke in the posterior limb of the internal capsule

e) Acoustic neuroma in the cerebellopontine angle

Lecture #03 Brainstem

Question 2: Which of the following is found immediately ventral to (abutting) the midbrain tegmentum?

a) Inferior brachium

b) Periaqueductal gray

c) Medial lemniscus

d) Substantia nigra

e) Red nucleus

Lecture #03 Brainstem

Question 3: Which interrupts the ventral median fissure at the spinomedullary junction?

a) Caudal half of the fourth ventricle

b) Inferior brachium

c) Superior brachium

d) Rostral half of the fourth ventricle

e) Pyramidal decussation

Lecture #03 Brainstem

Question 4: Which is the path of olivocerebellar axons?

a) Contralateral projection via the middle cerebellar peduncle

b) Ipsilateral projection via the superior cerebellar peduncle

c) Ipsilateral projection via the inferior cerebellar peduncle

d) Contralateral projection via the inferior cerebellar peduncle

e) Contralateral projection via the superior cerebellar peduncle

Lecture #03 Brainstem

Question 5: A patient with a Schwannoma in the cerebellopontine angle has problems with balance and hearing. What other problem is this patient most likely to have on the tumor side?

a) Loss of sensation from the face

b) Paralysis of the tongue

c) Difficulty with eye movements

d) Paralysis of the muscles of facial expression

e) Paralysis of the sternocleidomastoid and trapezius muscles

Lecture #03 Brainstem

Question 6: The closed portion of the medulla contains which?

a) Superior brachium

b) Caudal half of the fourth ventricle

c) Rostral half of the fourth ventricle

d) Continuation of the central canal

e) Inferior brachium

Lecture #03 Brainstem

Question 7: Loss of pain and temperature from the ipsilateral side of the face can be caused by which?

a) Ventral syndrome of the midbrain

b) Thalamic syndrome of Dejerine-Roussy

c) Damage to the trigeminal tubercle

d) Stroke in the posterior limb of the internal capsule

e) Acoustic neuroma in the cerebellopontine angle

Lecture #03 Brainstem

Question 8: Which is the most complete and correct list of the longitudinal (rostrocaudal) fibers of the basal pons?

a) Corticopontine axons, corticobulbar axons, middle cerebellar peduncle axons

b) Middle cerebellar peduncle axons, corticobulbar axons, medial lemniscus axons

c) Corticobulbar axons, corticospinal axons, corticopontine axons

d) Corticopontine axons, inferior cerebellar peduncle axons, middle cerebellar peduncle axons

e) Corticomesencephalic axons, corticopontine axons, medial lemniscus axons

Lecture #03 Brainstem

Question 9: Which two structures are found in the lateral area of the medulla between the ventrolateral and dorsolateral sulci?

a) Gracile tubercle and spinal nucleus

b) Olive and trigeminal tubercle

c) Inferior and middle cerebellar peduncle

d) Gracile and cuneate tubercle

e) Left and right corticospinal tracts

Lecture #03 Brainstem

Question 10: The lateral reticular area of the medulla contains neurons with which function?

a) Coordination of cranial nerve reflexes

b) Regulating burst mode of thalamocortical neurons

c) Generating error signals sent to the cerebellum

d) Production of norepinephrine

e) Production of serotonin

Lecture #03 Brainstem

Question 11: Which of the following is in the midbrain tegmentum?

a) red nucleus

b) substantia nigra

c) corticospinal tract

d) periaqueductal gray

e) superior colliculus

Lecture #03 Brainstem

Question 12: Which is adjacent to the ventral median fissure of the medulla?

a) Obex of the fourth ventricle

b) Corticospinal tract

c) Superior brachium

d) Cuneate tubercle

e) Inferior brachium

Lecture #03 Brainstem

Question 13: A lesion of the basal portion of the pons would affect which?

a) corticopontine fibers

b) spinothalamic tract

c) medial lemniscus

d) reticular formation

e) trigeminothalamic tract

Lecture #03 Brainstem

Question 14: The open portion of the medulla contains which?

a) Rostral half of the fourth ventricle

b) Pyramidal decussation

c) Inferior brachium

d) Superior brachium

e) Caudal half of the fourth ventricle

Lecture #03 Brainstem

Question 15: Which axons comprise the crus cerebri?

a) Corticospinal, pontocerebellar

b) Corticospinal, corticobulbar, corticopontine

c) Corticospinal, pyramidal, corticobulbar

d) Corticospinal, frontopontine, temporopontine

e) Frontopontine, temporopontine, parietopontine, occipitopontine

Lecture #03 Brainstem

Question 16: A stroke in the tegmentum of the pons would affect which?

a) Pontocerebellar fibers

b) Corticopontine fibers

c) Corticobulbar tract

d) Medial lemniscus

e) Corticospinal tract

Lecture #03 Brainstem

Question 17: Which neurons are in the mesencephalic nucleus of the trigeminal nerve?

a) First order unipolar proprioceptive neurons

b) Second order pain and temperature neurons

c) Second order proprioceptive neurons

d) Trigeminothalamic neurons

e) First order pain and temperature neurons

Lecture #03 Brainstem

Question 18: Which are axons of the superior brachium?

a) Retinal axons projecting to the tectum

b) Lateral Geniculate Nucleus axons projecting to the tectum

c) Superior olivary axons projecting to the inferior colliculus

d) Tectal axons projecting to the Lateral Geniculate Nucleus

e) Olivocerebellar axons

Lecture #03 Brainstem

Question 19: A meningioma growing into and destroying the trigeminal tubercle (tuberculum cinereum) on the lateral surface of the medulla will cause loss of which?

a) Pain and temperature from the contralateral face

b) Proprioception from the ipsilateral face

c) Pain and temperature from the ipsilateral face

d) Fine touch from the contralateral face

e) Fine touch from the ipsilateral face

Lecture #03 Brainstem

Question 20: What is the destination of trigeminal lemniscus?

a) Chief (or main, or principal) sensory nucleus

b) Facial nucleus

c) Supraoptic nucleus

d) Ventral posterolateral nucleus

e) Ventral posteromedial nucleus

Lecture #03 Brainstem

Question 21: What is the destination of trigeminothalamic fibers?

a) Ventral posteromedial nucleus

b) Chief (or main, or principal) sensory nucleus

c) Ventral posterolateral nucleus

d) Facial nucleus

e) Supraoptic nucleus