Lecture #03 Brainstem

Question 1: Which of the following is found immediately ventral to (abutting) the midbrain tegmentum?

a) Periaqueductal gray

b) Substantia nigra

c) Inferior brachium

d) Red nucleus

e) Medial lemniscus

Lecture #03 Brainstem

Question 2: Which interrupts the ventral median fissure at the spinomedullary junction?

a) Rostral half of the fourth ventricle

b) Superior brachium

c) Pyramidal decussation

d) Caudal half of the fourth ventricle

e) Inferior brachium

Lecture #03 Brainstem

Question 3: The lateral reticular area of the medulla contains neurons with which function?

a) Regulating burst mode of thalamocortical neurons

b) Generating error signals sent to the cerebellum

c) Production of serotonin

d) Production of norepinephrine

e) Coordination of cranial nerve reflexes

Lecture #03 Brainstem

Question 4: Ipsilateral paralysis of all muscles of facial expression is a common complication of which?

a) Ventral syndrome of the midbrain

b) Medial medullary syndrome

c) Stroke in the posterior limb of the internal capsule

d) Lateral medullary syndrome

e) Acoustic neuroma in the cerebellopontine angle

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) Paralysis of the tongue

b) Difficulty with eye movements

c) Loss of sensation from the face

d) Paralysis of the sternocleidomastoid and trapezius muscles

e) Paralysis of the muscles of facial expression

Lecture #03 Brainstem

Question 6: Which axons comprise the crus cerebri?

a) Corticospinal, pyramidal, corticobulbar

b) Frontopontine, temporopontine, parietopontine, occipitopontine

c) Corticospinal, frontopontine, temporopontine

d) Corticospinal, corticobulbar, corticopontine

e) Corticospinal, pontocerebellar

Lecture #03 Brainstem

Question 7: The open portion of the medulla contains which?

a) Rostral half of the fourth ventricle

b) Inferior brachium

c) Superior brachium

d) Caudal half of the fourth ventricle

e) Pyramidal decussation

Lecture #03 Brainstem

Question 8: What is the destination of trigeminothalamic fibers?

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

b) Supraoptic nucleus

c) Ventral posteromedial nucleus

d) Ventral posterolateral nucleus

e) Facial nucleus

Lecture #03 Brainstem

Question 9: 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) Fine touch from the contralateral face

c) Pain and temperature from the ipsilateral face

d) Proprioception from the ipsilateral face

e) Fine touch from the ipsilateral face

Lecture #03 Brainstem

Question 10: Which of the following is in the midbrain tegmentum?

a) substantia nigra

b) periaqueductal gray

c) superior colliculus

d) corticospinal tract

e) red nucleus

Lecture #03 Brainstem

Question 11: Which are axons of the superior brachium?

a) Tectal axons projecting to the Lateral Geniculate Nucleus

b) Superior olivary axons projecting to the inferior colliculus

c) Retinal axons projecting to the tectum

d) Lateral Geniculate Nucleus axons projecting to the tectum

e) Olivocerebellar axons

Lecture #03 Brainstem

Question 12: Which is the path of olivocerebellar axons?

a) Ipsilateral projection via the inferior cerebellar peduncle

b) Contralateral projection via the superior cerebellar peduncle

c) Ipsilateral projection via the superior cerebellar peduncle

d) Contralateral projection via the middle cerebellar peduncle

e) Contralateral projection via the inferior cerebellar peduncle

Lecture #03 Brainstem

Question 13: Which two structures are found in the lateral area of the medulla between the ventrolateral and dorsolateral sulci?

a) Inferior and middle cerebellar peduncle

b) Gracile and cuneate tubercle

c) Gracile tubercle and spinal nucleus

d) Olive and trigeminal tubercle

e) Left and right corticospinal tracts

Lecture #03 Brainstem

Question 14: Which is the most complete and correct list of the longitudinal (rostrocaudal) fibers of the basal pons?

a) Corticomesencephalic axons, corticopontine axons, medial lemniscus axons

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

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

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

e) Corticobulbar axons, corticospinal axons, corticopontine axons

Lecture #03 Brainstem

Question 15: A lesion of the basal portion of the pons would affect which?

a) corticopontine fibers

b) reticular formation

c) spinothalamic tract

d) medial lemniscus

e) trigeminothalamic tract

Lecture #03 Brainstem

Question 16: Which neurons are in the mesencephalic nucleus of the trigeminal nerve?

a) Second order pain and temperature neurons

b) Second order proprioceptive neurons

c) First order pain and temperature neurons

d) Trigeminothalamic neurons

e) First order unipolar proprioceptive neurons

Lecture #03 Brainstem

Question 17: Which is adjacent to the ventral median fissure of the medulla?

a) Corticospinal tract

b) Inferior brachium

c) Obex of the fourth ventricle

d) Superior brachium

e) Cuneate tubercle

Lecture #03 Brainstem

Question 18: The closed portion of the medulla contains which?

a) Caudal half of the fourth ventricle

b) Superior brachium

c) Continuation of the central canal

d) Rostral half of the fourth ventricle

e) Inferior brachium

Lecture #03 Brainstem

Question 19: What is the destination of trigeminal lemniscus?

a) Facial nucleus

b) Supraoptic nucleus

c) Ventral posterolateral nucleus

d) Ventral posteromedial nucleus

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

Lecture #03 Brainstem

Question 20: Loss of pain and temperature from the ipsilateral side of the face can be caused by which?

a) Acoustic neuroma in the cerebellopontine angle

b) Stroke in the posterior limb of the internal capsule

c) Damage to the trigeminal tubercle

d) Thalamic syndrome of Dejerine-Roussy

e) Ventral syndrome of the midbrain

Lecture #03 Brainstem

Question 21: A stroke in the tegmentum of the pons would affect which?

a) Corticobulbar tract

b) Pontocerebellar fibers

c) Medial lemniscus

d) Corticopontine fibers

e) Corticospinal tract