TEST BANK

Doctor 2019

SUBJECT:

CNS-final (Anatomy, Microbiology, Pathology, physiology, Biochemistry,Pharmacology, Pbl, labs)

COLLECTED BY :

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Anatomy

1-Lesion of the subthalamic nucleus is usually present in which of the following:

a. Huntington chorea.
b. Athetosis.
c. Parkinsons disease
d. Hemiballism.
e. More than one of the above

2-An example of apraxia would be which one of the following?

a. Patient cannot name colors
b. Patient can't divide a line in the middle
c. Patient has inability to show how to cut with imaginary scissors
d. Patient has difficulty repeating the sounds (ba ba ba., ta ta ta., ga ga ga.)
e. Patient crowds all the numbers onto the right side of the clock when asked to draw the face of a clock

3-Which one of the following arteries is not supplying the internal capsule:

a. Anterior cerebral
b. Posterior choroidal
c. Middle cerebral
d. Anterior choroidal
e. Posterior cerebral

4-Which of the flowing area lesion is manifested on the ipsilateral side?

a. 4
b. 3.1.2

c. Spinocerebellum
d. Corpus striatum
e. Posterior limb of internal capsule

5-Which of the following structures is not in direct anatomical relation with the caudate Nucleus?

a. Anterior horn of the lateral ventricle
b. Body of the lateral ventricle
c. Posterior horm of the lateral ventricle
d. Inferior horn of the lateral ventricle
e. Amygdala

6-Regarding the Thalamus, Choose the Incorrect statement:

a. Forms part of the lateral wall of the third ventricle
b. Forms part of the floor of the body of the lateral ventricle
c. Its anterior part forms the posterior boundary of the interventricular foramen
d. It is separated from the formix by the choroid fissure
e. It is connected to the fornix through the septum pellucidum

7-Concerning the circle of Willis, choose the correct statement:

a. It is protected by the Cerebello-Medullary Cisterna
b. Posterior communicating artery connects between middle and posterior cerebral arteries
c. Situated over the interpeduncular fossa
d. Connects between vertebra-basilar system anteriorly and internal carotid system posteriorly
e. It does not have physiological significance in cerebral circulation

8-Choose the unmatched pairs of the followings:

a. Cerebellum- Ataxia
b. Premotor area-Apraxia
c. Basal nuclei- Parkinsonism

d. Area 39-Nonfluent Aphasia
e. Posterior parietal association area-Asteriognosis

9-Concerning the internal capsule, Choose the unmatched pairs of the followings:

a. Anterior limb - corticospinal fibers
b. Retrolentiform part-optic radiation
c. Sublentiform part-auditory radiation
d. Posterior limb- superior thalamic radiation
e. Genu- corticobulbar fibers

10-Concerning the glial cells, choose the Incorrect statement:

a. Oligodendrocyes are responsible for myelination of peripheral nerves
b. Microglia are phagocytic cells of the Central Nervous System
c. Ependymal cels are lining the ventricles of the brain
d. Astrocytes are forming the Blood brain barrier
e. Schwann cells are derived from the neural tube

11-Which of the following physical signs is not suggesting the involvement of the left middle cerebral artery?

a. Paralysis of the right arm and forearm
b. The presence of aphasia
c. Paralysis of the right leg and foot
d. Conjugate movement of both eyes to the left side
e. General sensory loss on the right arm and forearm

12-Which of the following structures is not derived from the alar plate?

a. Sensory horn of the spinal cord
b. Crus cerebri
c. Rhombic lips
d. Tectum
e. Sensory nuclei of the medulla oblongata

13-Regarding the cerebellum and the fourth ventricle, choose the correct statement:

a. Foramen of magendie lies in the floor of the fourth ventricle
b. The Cerebellum is supplied by the vertebrobasilar system
c. Ventral spinocerebellar tract passes through the inferior cerebellar peduncle
d. Corticopontocerebellar fibers enters the cerebellum through the superior cerebellar peduncle
e. The fourth ventricle is connected to the lateral ventricles through the cerebral aqueduct

14-Not supplied by vertebrobasilar system:

a. Temporal lobe
b. Pons
c. Visual cortex

15-Wrong statement

- ML projects to the thalamus through VPM (removed)

16-Wrong about motor cortex

- Connected to ipsilateral body

17-Wrong combination

- Activation of gamma motor neuron leads to...faster muscle contraction(maybe)

18-The cause of spasticity in spinal cord lesions is loss of

- Medullary reticulospinal tract

19-A patient unable to move the left eye out and below and spastic hemiplegia in the right half of the body, obstruction is most likely in

- Posterior cerebral artery (removed)

20-Wrong about a lesion to the left posterior limb of the internal capsule

- Mouth deviates to the right

21-Wrong about basal ganglia

- When a new task is learned with skill, motor loop has decreasedactivity

22-Wrong about cerebellum

- Output causes only inhibition of agonist muscle at the end of movement

23-Wrong about anencephaly

- Associated with spina pifida in the lumbar region

24-True about meylominingiocele

- All (spina pifida is some vertebrae, absent part of dura and bulging of arachnoid, commonly associated with neurological symptoms)

25-A man who had lost comprehension of written and spoken language, fluent but what he says makes little sense. Lesion is mostly in

- Wernicke's area

26-Wrong about language centres in the brain

- Hemialexia can be due to lesion of the left angular Gyrus

27-Broca's aphesia is usually associated with

- Spastic paralysis

28-Not part of circle of Willis?

- Middle cerebral artery

29-Post limb of internal capsule is between?

- Thalamus and lentiform

30-What artery supplies the anterior end of caudate and lentiform nucleus:

- Anterior cerebral artery

31-Superior angle of the 4th ventricle attached to?

- Cerebral aqueduct

32-CSF is drained by:

- Arachnoid villi and granulations

33-The area responsible of fine movements?

- Gyrus in front of central sulcus (precentral gyrus)

34-Wernicke's area contributes which part in the cortex:

- Lateral sulcus

Answers

1	d	8	d
2	c	9	a
3	b	10	a
4	c	11	c
5	c	12	b
6	e	13	b
7	c	14	a

Anatomy Lab

1-Lower cervical vertebrae

2-Filum terminale

3-Pionting at the dentate nucleus in cerebellum

4-Question of the sup colliculus of midbrain, which nerve emerges from here.

- Occlumotor.

5-Arrow pointing to:

- Precentral gyrus, thalamus

6-This place refers to?

- The floor of the fourth ventricle

7-The purple arrow refers to:

- Postcentral gyrus

8-The purple arrow refers to:

- Calcarine sulcus

9-The purple arrow refers to:

- Anterior limb of internal capsule

10-Number 3 refers to?

- Superior colliculus

Anatomy-018

1)Lesions of the speech center in the frontal lobe results in :
a. Inability to select appropriate words for use in speech-language comprehension .
b. Failure of coordination of speech muscles .
c. Inability to understand spoken language .
d. Sensory aphasia
e. Paralysis of speech muscles .

2)Which of the following structures is not derived from the procencephalon ?
a. Cerebral cortex
b. thalamus
c. midbrain
d. lateral ventricle
e. Basal nuclei

3)Which of the following structures is directly related anatomically to the third ventricle ?
a. Posterior horn of the lateral ventricle
b. cerebellum
c. Amygdala
d. Calcaravis
e. lamina terminalis

4)Which of the flowing area lesion is manifested on the ipsilateral side ?
a.3.1.2
b.Corpus striatum
c.Posterior limb of internal capsule
d.8
e.4

5)Concerning the internal capsule, Choose the matched pair of the followings :
a. Retrolentiform part- audiotory radiation
b. Posterior limb- superior thalamic radiation
c. Anterior limb - inferior radiation
d. Genu- sensory radiation
e. Sublentiform part-optic radiation

6)Concerning the hippocampus, Choose the Incorrect statement :
a. Forms part of the roof of the inferior horn of the lateral ventricle
b. Is part of the limbic system
c. Its efferents are forming the fornix
d. Is situated inside the parahippocampal gyrus
e. Is supplied by the posterior cerebral artery

1-b
2-c
3-e
4-d
5-b
6-a

8) Which one of the following loops is involved in balance regulation ?
a. Cerebello-Globose- Emboliform-Rubral-spinal
b. Cerebello-Clobose- Emboliform-Thalamo- Cortico-Spinal
c. Cerebello-fastigeo- thalamo-cortico-spinal
d. Vestibulo-Flocuolo- Nodular-Vestibulo-Spinal
e. Cortico-Ponto- Cerebello- Dentato- Rubro-Thalamio- Cortical

9) Choose the matched pairs of the followings :
a. Premotor area-chorea
b. Cerebellum- parkinsonism
c. Area 45-Fluent Aphasia
d. Posterior parietal association area- Asteriognosis
e. Basal nuclei- hemianathesia

10) Regarding the Thalamus, Choose the correct statement : Related to Diencephalon lecture
a. It is separated from the fornix by the choroid fissure
b. Forms part of the medial wall of the third ventricle
c. It is connected to the corpus callosum by the septum pellucidum
d. Its posterior part forms the posterior boundary of the interventricular foramen
e. Forms part of the roof of the body of the lateral ventricle

11) which of the following structures is not supplied by the anterior cerebral artery?
a. Lateral half of the orbital surface
b. Septum pellucidum
c. Medial frontal gyrus
d. Genu of the corpus callosum
e. Anterior half of corpus striatum

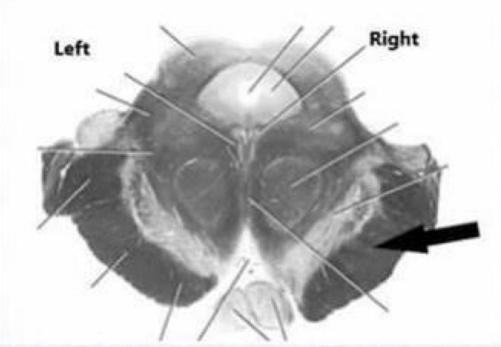
12) Which of the following physical signs is not suggesting the involvement of the left middle cerebral artery ?
a. Paralysis of the right side of the arm and forearm
b. Paralysis of the right leg and foot
c. Conjugate movement of both eyes to the left side
d. General sensory loss on the right side of the arm and forearm
e. The presence of aphasia

8-d
9-d
10-a
11-a
12-b

Anatomy lab-018

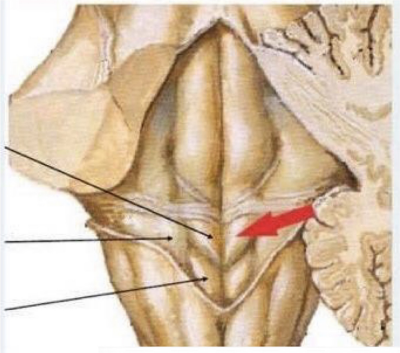
1-The pointed area contains mainly :

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



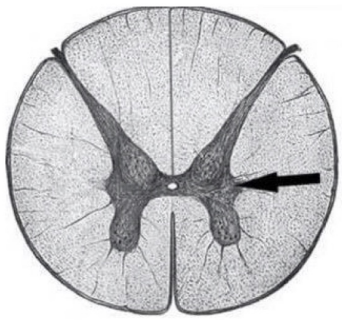
2-The pointed structure (red) is :

a. Hypoglossal triangle
b. Medial eminence
c. Facial colliculus
d. Vagal triangle
e. Vestibular area



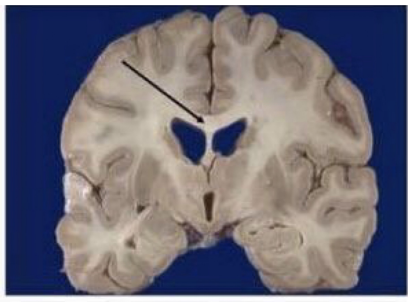
3)The cell bodies in the pointed area are cell:

a. Post ganglionic parasympathetic neurons
b. Ist order sensory neurons
c. Lower motor neurons
d. Preganglionic sympathetic neurons
e. Preganglionic parasympathetic neurons



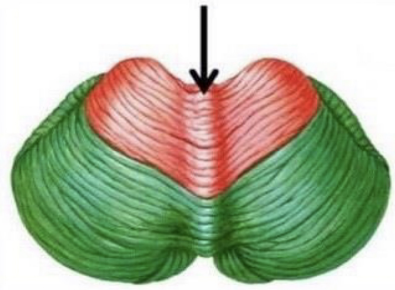
4)The pointed structure forms the roof of…… in this particular section :

a. Posterior horn of the lateral ventricle
b. Inferior horn of the lateral ventricle
c. Body of the lateral ventricle
d. Fourth ventricle
e. Anterior horn of the lateral ventricle



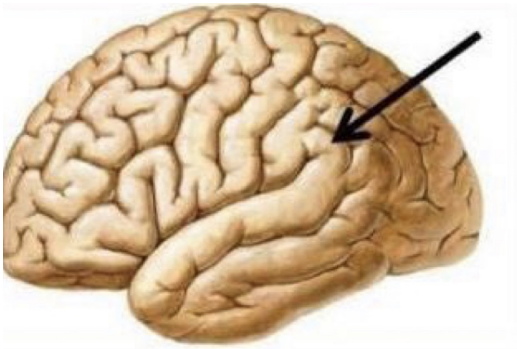
5)The pointed structure is connected with one of the following deep nuclei :

a. Fastigeal
b. Globose
c. Emboliform
d. Dentate
e. Floculonodular



6)Which of the following statements is incorrect about the pointed structure ?

a. Responsible for understanding both written and spoken words
b. Its lesion produce sensory aphasia
c. Is connected to inferior frontal gyrus
d. Responsible for Controlling motor muscles that produce speech
e. Supplied by the Middle cerebral artery



Answers

1-E
2-A
3-D
4-C
5-A
6-D

Biochemistry

1)Deficiency of vitamin B6 (pyridoxal phosphate) will result in the impairment of all the following pathways EXCEPT :

a. DOPA to dopamine
b. Norepinephrine to epinephrine
c. Aspartate to glutamate
d. Tryptophan to serotonin
e. Histidine to histamine

2)The 'retrograde' mechanism of NO (nitric oxide) means :

a. It is produced in the post-synaptic neurone .
b. It regulates the pre-synaptic neurone .
c. It activates guanylyl cyclase .
d. It diffuses to nearby cells .
e. It binds to post-synaptic receptors .

3)A neurotransmitter that is not deactivated by MAO :

a. GABA
b. Histamine

4)SAM is used in all of the following except:

a. N-methyl trans
b. Deamination
c. Methylation of phosphodylether …
d. COMT

5)Which is true about neuropeptides and small transmitters :

a. Both released by vesicular mechanism
b. Both synthesized in cell body of presynaptic cell
c. Both can be released from a site far away from the site of Ca entry
d. Both induce a signal that can be terminated by reuptake

6)SNARE :

- Its job is attachment to presynaptic membrane

7)TRUE about Histidine to histamine reaction :

- Requires pyridoxal phosphate

8)Cant cross BBB :

- Glutamate

9)TRUE about Dopamine B-hydroxylase :

- requires O2 + Ascorpate (vit C)

1-b
2-b
3-a
4-b
5-a

10)The indicator of parkinson's disease is :
- homovanillic acid

11)Which one of the following is WRONG about glutamate :
- Cannot be synthesized inside neurons

12)Which one of the following is WRONG about catecholamine synthesis
- Dopamine and norepinephrine have vesical synthesis

13)An excitatory neurotransmitter that leaks to the cytosol to be converted to another neurotransmitter, can be recycled through a presynaptic neuron transporter and degraded by the liver or presynaptic enzymes is: 018
a. Gama-aminobutyric acid
b. Glycine
c. Epinephrine
d. Serotonin
e. Acetylcholine

14)You have recently heard that stem cells may have a potential in regenerating damaged lung tissue caused by SARS-CoV-2 in COVID-19. Before they can be used in clinic, the following has/have to be checked :
a. Carcinogenicity specifically if pluripotent stem cells are used
b. The mechanism by which stem cells repair the lost pulmonary function
c. All experimental stages starting with ex vivo experiments, animal stage, clinical trials of 3 stages
d. Food and drug administration approval in the country of practice .
e. All points have to be verified before stem cell can be used as a treatment for COVID-19

15)Which stem cell is the most potent, genetically engineered and causes no immune reaction :
a. iPS
b. embryonic
c. adult neural

16)Which is the best source for adult stem cells :
a. periventricular area
b. dentate of hippocampus
c. spinal cord

17)If you find out that a iPSC is working to produce dopamenirgic neurons that can be used in Parkinson's disease, you don't do this:
start clinical trials to use the technique in patients with Parkinson's disease

13-c
14-e
15-b
16-a

18)True about stem cells
- embryonal stem cells have more potency that adult

19)The statement that describes stem cells is : 018
a. Changes in the niche have no effect on the behaviour of stem cells
b. They can be used for cell- based therapy and modelling human diseases
c. Their niche drive their differentiation and does not keep their stemness
d. They have a limited ability to asymmetrically divide
e. We can use them as a cell- based therapy directly after we test them in tissue culture disease models and they show an improvement of the disease

Physiology - not for Dr. Faisal -

1- Which of the following IS NOT a sign of basal ganglia disease ?
a. Ballismus .
b. Increased muscle tone.
c. Chorea .
d. Athetosis .
e. Nystagmus .

2-Tendon and stretch reflexes are clinically examined to asses :
a. Central delay time of the jerk
b. Integrity of reflex pathway in the spinal cord
c. The total reflex time of the jerk
d. Lesions in the hypothalamus that affect anxiety and behavior
e. Integrity of muscle spindles

3-If a sharp pointed object touches the foot of a person, the foot is immediately withdrawn from the object involuntarily. This action involves the receptors :
a. Free nerve endings .
b. Ruffini's end organs .
c. Hair follicle receptors .
d. Meissners's corpuscles .
e. Pacinian corpuscles .

4-The area of the motor cortex that is devoted to a particular region of the body is proportional to the :
a. Distance of the body area from the brain .
b. Number of sensory receptors in the area of the body .
c. Size of the body area .
d. Number of motor units in that region .
e. Size of the nerves that serve the area of the body .

19-b

1-e
2-b
3-a
4-d

5-Chief inhibitory neurotransmitter in the basal ganglia is :
a. Glutamate .
b. Norepinephrine .
c. Serotonin .
d. GABA .
e. Acetylcholine .

6-A patient with an inability to write or to generate meaningful speech i.e language, even though he can understand requesis and make sounds, most likely has a lesion in the :
a. Left parietal lobe
b. Left temporal lobe
c. Right frontal lobe
d. Left frontal lobe
e. Right temporal lobe

7-When gamma motor neuron discharge increases at the same time as alpha motor neuron discharge to the muscle
a. The number of impulses in spindle la afferents is smaller than when alpha discharge alone is increased
b. The number of impulses in spindle la afferents is greater than when alpha discharge alone is increased
c. The contraction of the muscle is maintained
d. There prompt inhibition of discharge in spindle la afferents
e. The muscle will not contract

8-Stretch of an innervated muscle evokes:
a. Stimulation of afferent neurons attached to nuclear bag fibers
b. Contraction of antagonistic muscles
c. Contraction of its intrafusal muscles of the spindle
d. Contraction of its extrafusal fibers
e. Relaxation of synergistic (agonist) muscles

9-The intermediate zone of the cerebellum
a. Compares the intentions of the higher motor centers with the actual movement of the muscles and correct any deviations from the intended movement
b. Plays a role in the planning and initiation of voluntary activity
c. Inhibit muscle tone
d. Controls eye movements
e. Is important for the maintenance of balance

10-Which of the following is an example of monosynaptic reflex:
a. Crossed extensor reflex
b. Abdominal reflex
c. Tendon reflex

5-d
6-d
7-c
8-d
9-a
10-e

d. Withdrawal reflex
e. Stretch reflex

11-Short term memory is characterized by:
a. Has permanent anatomical and/or chemical changes in the brain areas
b. Has fast recall time
c. Does not need registration of information
d. Needs consolidation of information
e. It has large capacity

12-A middle aged man present with tremors during voluntary action. Incoordinate movements, pendular knee reflex and staggering (drunken) gait. The man is most likely having lesion of:
a. Hypothalamus
b. Cerebral cortex
c. Basal ganglia
d. Cerebellum
e. Thalamus

13-Visceral pain can be evoked by the following, EXCEPT:
a. Distension
b. Ischemia
c. Chemical irritation
d. Sharp localized cutting
e. Spasm

Physiology 018 - for Dr. Faisal -

14)After falling down a flight of stairs, a young woman is found to have partial loss of voluntary movement on the right side of her body and loss of pain and temperature sensation on the left side below the midthoracic region. It is probable that she has a lesion :
a. Transecting the dorsal half of the spinal cord in the upper thoracic region .
b. Transecting the left half of spinal cord in the lumbar region .
c. Transecting the right half of the spinal cord in the upper thoracic region .
d. Transecting sensory and motor pathways on the right side of the pons .
e. Transecting the left half of spinal cord in the upper thoracic region .

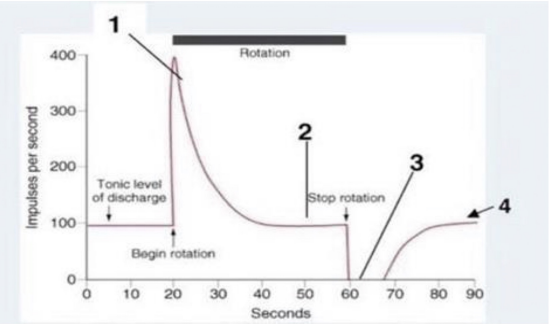
15)Which of the following statements is UNPAIRED :
a. Cerebellum lesion…..nystagmus and wide gate (drunken gait) .
b. Prefrontal corte…..personality trait and adjusting behavior .
c. Retrogarde amnesia…..lesion in the thalamus .
d. Lower motor neuron lesion…..areflexia .
e. Basal ganglia lesion…..action tremor (intention tremor) .

11-b
12-d
13-d
14-c
15-e

16) Which of the following is UNPAIRED ?
a. Dopamine…..Parkinson's disease
b. Basal ganglia…..dysarthria and dysmetria
c. Serotonin…..slow wave sleep
d. GABA…..the major inhibitory transmitters in the basal ganglia
e. Norepinphrine…..the locus ceruleus of the reticular activating system

17)Rigidity of the axial and antigravity muscles when cortical control over the brain stem is interrupted (decerebrate) is due to :
a. Over activity of pontine reticulospinal tract .
b. Over activity of medullary reticulospinal tract .
c. Over activity of corticospinal tract .
d. Disruption of the lateral vestibulospinal tract .
e. Disruption of the dorsal spinocerebellar pathway .

18)The figure above represents the response of a hair cell in the crista ampullaris of the semicircular canal to stimulation by rotation in a human subject. With the subject's eyes closed, the subjective sensation of rotation will be absent at which point/s indicated by the letters 1 through 4 ?
a. Point 2 and 4
b. Point 2 only
c. Points1 and 3
d. Point 1 only
e. Point 3 only



19) Which of the following is associated with paradoxical (REM) sleep ?
a. It constitutes around 75% of the sleeping time .
b. EEG with delta waves .
c. Night tremors .
d. Sleep walking .
e. Active dreaming that are vivid and memorable .

20)Which of the followings in NOT a suitable combination ?
a. Stretch reflex is highly localized excitatory monosynaptic reflex .
b. Stretch of an innervated muscle evokes contraction of its extrafusal fibers .
c. The nuclear-bag fibers of muscle spindles are innervated by A gamma nerve fiber .
d. The central ends of afferents from muscle spindles diverge to give the dorsal spinocerebellar ascending tract .
e. Muscle spindles density is more in flexors rather than in antigravity extensors .

16-b
17-a
18-a
19-e
20-e

21)The discharge from Golgi tendon organs initiated by excessive stretch of a skeletal muscle produces

a. Stimulation of a -motor neurons of the same muscle
b. of a -motor neurons of antagonistic muscles
c. Stimulation of y-motor neurons of the same muscle
d. Inhibition of y-motor neurons of antagonistic muscles
e. Inhibition of a -motor neurons of the same muscle

22-Which of the following about cerebellum are paired correctly ?

a. Cerebellar dysfunction…..athetosis and hemiballismus .
b. Spinocerebellum and sequencing…..timing of motor movements .
c. Lateral cerebellar hemisphere…..coordination of axial muscles .
d. Purkinje cells…..inhibitory input to deep nuclear cells of cerebellum .
e. Vestibulocerebellum (flocculonodular lobe)…..coordination of voluntary movements of the distal flexors .

23-A person with hemorrhage that affects the internal capsular fibers and hemiplegia and has aphasia, most probably his/her lesion is located at :

a. Basal ganglia
b. Cerebellum
c. Hypothalamus.
d. Left cerebral hemisphere
e. Right cerebral hemisphere

Physiology lab

1- A test used to asses lower limb coordination :

a. Finger-to-nose test
b. Rapid-alternating movement test
c. knee-jerk reflex
d. Heel-to-shin test

2- All of the following are tested at inspection except :

a. Tremors
b. Rigidity
c. Fasciculations
d. Muscle wasting

3-Power level when the patient is able to move his arm against gravity only

a. 1
b. 2
c. 3
d. 4

4-All true about color blindness except :

a. The mostly affected gene is of blue color
b. Mother is mostly a carrier of the affected gene
c. The person can't distinguish between certain shades of colors
d. Affect males more than females

21-e
22-d
23-d
1-d
2-b
3-c
4-a

5-A patient with left ear sensorineural deafness, which of the following is true ?

- Positive Rinne test in left ear

6-When the person's visual acuity is 8/12 on right eye and 6/12 on left eye, which of the following is true :

- The person is able with his left eye at 6 meters what a normal person can see at 12 meters

7) During a neurological examination on a 30-year-old patient, you performed Rinne and Weber tests. Rinne test showed that bone conduction was better than air conduction in the RIGHT ear, and air conduction was better than bone conduction in the LEFT ear. The Weber test revealed localization to the RIGHT ear. What does this patient have ? 018

a. Conductive hearing loss in the right ear
b. Sensorineural hearing loss in the left ear
c. Normal hearing
d. Sensorineural hearing loss in the right ear
e. Conductive hearing loss in the left ear

8) During neurological examination of a patient, which of the following signs in NOT characteristic of upper motor neuron lesion ? 018

a. Hyperreflexia .
b. Weakness of power of the muscle .
c. Absence of fasciculations .
d. Increased muscle tone .
e. Atrophy of muscle .

Microbiology

1-7 year old with acute headache, fever and altered mental status, on examination he is positive to kernig's test and no signs to increased intracranial pressure, choose the true statement about this case .

a. Should start treatment before lumber Puncture
b. Meningoencephalitis because of decreased level of consciousness
c. Kernig's positive rules out fungal meningitis
d. Test for TB is required and done immediately

2-The least likely found result in the above case :

a. Gram positive bacteria
b. Gram negative rod
c. Increase CSF: serum glucose level
d. Slightly increase in protein level
e. Increase in WBCs

3-Choose the right sentence about immunity in CNS:

a. The immune system is a critical part of a functioning central nervous system (CNS)
b. Brain parenchyma doesn't have immune cells even if injured
c. Microglial cells have lower threshold than macrophages
d. Neutrophils are the main immune cells in CNS

7-a
8-e

1-b
2-c
3-a

4-CSF analysis of a patient that presented with headache, fever and meningeal showed normal glucose and protein levels, increase in WBC with lymphocyte predominance and a negative gram stain. Which of the following tests is most useful in determining the causative agent?

a. CSF Polymerase chain reaction (PCR)
b. Brain biopsy
c. CSF culture on chocolate agar
d. Testing cranial nerves function
e. Serology for arbovirus IgG antibodies

5-A patient is present with meningitis signs, which of the following is correct ?

a. Antibiotics usage may give false negative results
b. Negative kernigs and breduzski signs exclude meningitis
c. High glucose level is most likely to be found

6-All of the following are false regarding Haemophilus influenzae EXCEPT:

a. Does not possess a capsule .
b. Can withstand dryness .
c. Is resistant to 3rd-generation cephalosporins .
d. A rare cause of meningitis now in Jordan .

7-Which one of the following causes chronic Meningitis ?

a. S. pneumonia
b. N. meningitidis
c. Candida albicans

8-Which of the following is true regarding immunity in the central nervous system (CNS)? 012

a. Microglia and complement proteins are immune components found in the brain parenchyma
b. Concentration of antibodies in the CSF is higher than in serum
c. Polymorphonuclear cells are abundant within the CSF (> 100 cells / microliter)
d. Pathogen access to the brain parenchyma is not restricted by immunological barriers
e. The bacterial microbiota in the CSF is important in maturity of the immune system

9-A 7-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. Lumber puncture was performed followed by empiric antibiotic therapy. Gram staining of CSF demonstrated gram negative diplococci. Which of the following is true regarding this case? 018

a. The causative agent can colonize the upper respiratory tract.
b. A CSF acid fast stain should be ordered due to high suspicion of Tuberculous meningitis.
c. Initiation of antibiotic therapy should have been done before lumber puncture.
d. A positive kerning's sign indicates involvement of brain parenchyma and meningoencephalitis.

4-a
5-a
6-d
7-c
8-a
9-a

e. This condition is self-limiting with low mortality and morbidity.

10-True about familial Creutzfeldt–Jakob:
a. Acyclovir is important as empirical treatment
b. Brain biopsy has no importance in diagnose
c. There is no treatment for this disease

11-Choose the true sentence about encephalitis:
a. Rabies is treated by supportive care and antibiotics
b. Arboviruses are the most common cause of epidemic cases
c. Herpes cause encephalitis in 70% of cases

12-Which of the following is true regarding encephalitis ? 018
a. Streptococci are the most identified pathogens in sporadic cases of encephalitis .
b. Encephalitis patients are usually treated at home with anti-pyrectics and painkillers .
c. Persons infected with Herpes simplex type-1 commonly develop encephalitis .
d. CSF culture is necessary to confirm the diagnosis of encephalitis .
e. Arboviruses are associated with epidemics of encephalitis .

13-A 30-year-old male presented to his local primary health care clinic following an assault during which he sustained a right frontal scalp laceration and trauma to the head. Two days later, he developed signs of a left hemiplegia with associated seizures, but examination of all other systems was normal. A computed tomography (CT) scan of the brain revealed a right frontal hypodense lesion with midline shift suggestive of an early brain abscess. Which of the following is part of this patient management ? 018
a. The patient should undergo emergency craniectomy with drainage of the abscess .
b. The patient should wait until the abscess is fully formed then undergo craniectomy .
c. The patient is given acyclovir and monitored in the ICU .
d. The patient is provided with oral antibiotics and sent home .
e. The patient should undergo lumber puncture immediately to confirm the diagnosis .

14-False about aseptic meningitis:
- Only caused by viruses

15-False statement about meningitis (or encephalitis):
- Brain biopsy is usually acquired for diagnostic purposes

16-Wrong about a patient with CJD:
- His survival median is very long

17-The most common cause of sporadic encephalitis:
- HSV

18-Wrong statement about encephalitis:
- It cannot be prevented or treated

19-Wrong statement about meningitis (or encephalitis):
- Brain biopsy is usually acquired for diagnostic purposes

10-c
11-b
12-e
13-a

Pathology -for Dr. Heyam-

1- Which of the following statements is correct regarding the pathogenesis of Alzheimer's disease ?

a. A key step in its pathogenesis is intracellular accumulation of AB amyloid within cortical neurones b. AB protein accumulates earlier in patients with Dawn syndrome because these
patients have an increased level of beta secretase .

c. Intracellular accumulation of Tau protein occurs early in the disease process .

d. Amyloid plaques and Tau accumulation can be seen due to advanced age, even in people not suffering from Alzheimer's disease .

e. Polymorphisms of Apolipoprotein E (Apo E) increase the risk of Alzheimer disease .

2-Intracytoplasmic eosinophilic round to elongated inclusions that have a dense core surrounded by a pale halo which are positive with immunohistochemical stain to alpha synuclein are characteristic of

a. Parkinson disease
b. Huntington chorea
c. Alzheimer
d. Spinocerebellar ataxia
e. Amyotrophic lateral sclerosis

3-A 6 year old boy suffered from ataxia and frequent falls. MRI scan showed a well circumscribed lesion in the cerebellum which was partly cystic. Histologic examination showed a tumour containing microcyss and Rosenthal fibres. what is your diagnosis ?

a. Low grade oligodendroglioma
b. Pilocytic astrocytoma
c. Cerebellar ependymoma
d. Medulloblastoma
e. Glioblastoma

4-Which of the following is correct regarding astrocytoma :

a. IDH (isocitrate dehydrogenase) mutation is a late event in the pathogenesis of gliomas
b. Pseudo- rosettes are seen in low grade astrocytomas
c. The presence of necrosis within a glioma indicates a high grade and a bad prognosis
d. Contrast enhancing lesions are usually low grade lesions
e. Gliomas are negative with GFAP (glial fibrillary acidic protein)

1-e
2-a
3-b
4-c

5-Match each neurodegenerative disease with the protein responsible for its pathogenesis :

1. Alzheimer disease
2. Parkinson
3. Huntington Chorea
6. Frontotemporal dementia
7. Pick disease

a. Tau
b. Amyloid
d. Protein involved in long term
f. Alpha synuclein

6-Which of the following is caused by a trinucleotide repeat mutation ?
a. Fredrick ataxia
b. Huntington disease
c. Alzheimer
d. Pick
e. A and B

7-Intranuclear inclusions are seen in which of the following :
a. Pick
b. Alzheimer
c. Huntington
d. ALS
e. Fredrick ataxia

8-A 67 year old male presents with tremors, rigidity and slow movement . You notice that he had stooped posture and diminished facial expressions. He seems to have good cognitive function and no memory loss. All of the following play a role in his disease except :
a. accumulation of alpha synculein
b. accumulation of protein that acts as a prion protein
c. lewy bodies
d. loss of pigmented neurons in substantia nigra
e. accumulation of a protein important for long term memory storage

9-Which of the following is incorrect about amyloid accumulation in the brain:
A.forms extracellular plaques
b. causes hyper phosphorylation of Tau protein
C.accumulation in the elderly is not necessarily associated with dementia
d. increased risk of accumulation in people with Down syndrome
E.is the main protein responsible for Pick disease

5-(1-a+b. 2-f
3-d. 6-a
7-a)
6-e
7-c
8-e
9-e

10-Which of the following mutations is associated with oligodendrogliomas:
A.P53 tumor suppressor gene inactivation
B.IDH1 gene mutation
C.RB gene mutation
d. PI3k gene mutation
E.Ip and 19q codeletions

11-All of the following are features of pilocytic astrocytomas EXCEPT:
A.Relatively benign.
b. Can affect the optic pathways and tracts.
C.Is often associated with cust formstion
D.Occur in children and young adults.
E.Most common location is the spinal cord.

12-All of the following tumor locations are correct EXCEPT:
A.Myxopapillary ependymoma....Filum terminale
b. Medulloblastoma…..Cerebellum
c. Dysembryoplastic neuroepithelial tumor…..Superficial temporal lobe
d. Central Neurocytoma…..Foramen of Monro
e. Ependymoma…..Spinal cord in children

13-All of the following are true regarding grade II meningiomas EXCEPT :
a. Clear variant
b. Brain invasion .
c. Choroid variant .
d. Small cells, prominent nuclei and necrosis .
e. More than 19 mitotic figures/10 HPF .

14-All of the following are correct locations for deposition of amyloids in Alzheimer's disease EXCEPT :
a. Amygdala
b. Nucleus basalis of Meynert
c. Entorhinal cortex
d. Primary motor and sensory cortices
E.hippocampus

15-All of the following is correct regarding neurodegenerative disorders EXCEPT :
a. Neuritic plaques consist of amyloids surrounded by dystrophic neurites .
b. Neurofibrillary tangles contain tau protein
c. Deposition of AL amyloids in the cerebral cortex in the case of Alzheimer's disease .
d. Intranuclear aggregates containing an expanded polyglutamine tract in HD .
e. A+ B

10-e
11-e
12-e
13-e
14-b
15-c

16-Pick's disease is due to :
a. Deposition of synuclein protein .
b. FTLD-tau protein inclusion bodies .
c. Huntingtin protein deposition .
d. FTLD-TDP43 protein inclusion bodies .
e. Mutations in SOD-1 gene .

17-All of the following regarding Parkinson's disease is correct EXCEPT :
a. Lesions usually appear in the medulla and pons before the substantia nigra .
b. Lewy bodies contain deposits of synuclein protein .
c. Death usually occurs due to infections or trauma from everyday falls .
d. Lesions can be found in one of the cranial nerve nuclei causing autonomic disturbances .
e. When dementia arises within 5 years of the onset of motor symptoms, it is referred to as Lewy body dementia .

18-A 67 year old male presents with tremors, rigidity and slow movement. You notice that he had stooped posture and diminished facial expressions. He seems to have good cognitive function and no memory loss. Which of the following plays a role in his disease?
a. Intranuclear protein accumulation
b. A trinucleotide repeat mutation
c. Accumulation of a protein important for long term memory .
d. Loss of pigmented neurons in mammillary bodies
e. Accumulation of protein that acts as a prion protein

19-Choose the INCORRECT combination :
a. Oligodendroglioma : Ip 19q codeletion .
b. Pilocytic astrocytoma : cerebellar location .
c. Ependymoma : pseudorosettes
d. Medulloblastoma : low cellualrity
e. Glioblastoma : palisaded necrosis

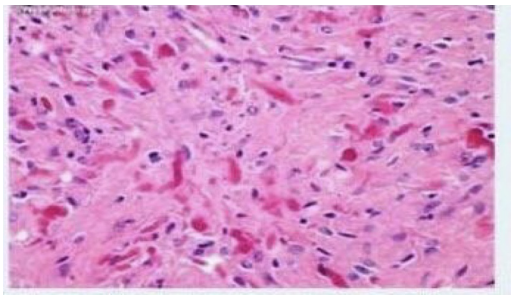
20-Which of the following is incorrect about amyloid accumulation in the brain :
a. Can be part of the normal aging process
b. Forms extracellular plaques
c. Causes secondary hyper phosphorylation of Tau protein
d. Increased risk of accumulation in people with Down syndrome is due to deranged beta secretase levels .
e. If associated with neurofibrillary tangles it point towards a diagnosis of Alzheimer disease

16-b
17-e
18-e
19-d
20-d

21-Patho lab:

This picture shows a feature of pilocytic astrocytoma which is :

a. Rosenthal fibers
b. Microcysts
c. High cellularity
d. Palisaded necrosis
e. GFAP positivity



Pbl

1) Removing a bone flap from the skull to operate on the brain is called:

a. Craniotomy
b. Cortectomy
c. Decompression
d. Ventriculostomy
e. Skullectomy

2) One is FALSE about Extradural hematoma:

a. The cause is usualy a trauma to the pterion of the skull
b. Prognosis is excellent if operated quickly
c. The source of bleeding is venous
d. Evacuation should be done as soon as possible
e. It is also called Epidural hematoma

3-All of the following are true about Extradaural hematoma , EXCEPT?

Answer : Venous supply

21-A
1-A
2-C

Pharma

1-Which of the following is a GABA reuptake inhibitor?
a. Carbamazepine
b. Valproic acid
c. None of the other options
d. Phenytoin
e. Lamotrigine

2-Which of the following has gingival hypertrophy as a side effect?
a. Valproic acid
b. Lamotrigine
c. Ethosuximide
d. Phenytoin
e. Carbamazepine

3-Which of the following is the drug of choice for absence seizure?
a. Ethosuximide
b. Phenytoin
c. Valproicacid
d. Lamotrigine
e. Carbamazepine

4-Which of the following drugs is used in the treatment of Parkinsonian disorders?
a. Phenytoin
b. Haloperidol
c. Fluoxetine
d. Two of the other options
e. Selegiline

5- Drug-induced parkinsonism may occur during treatment with typical antipsychotic agents. The parkinsonian symptoms can be treated with:
a. Anticholinergic drugs
b. Levodopa
c. Chlorpromazine
d. Haloperidol

6 -Drug of choice for trigeminal neuralgia:
a. Carbamazepine
b. Valproic acid
c. Lamotrigine
d. Ethosuximide

7-You see an adolescent female patient in your office who is being treated for epilepsy. She has hirsutism, her lips are thickened, the mass of skin around her cheekbones is increased, and she has gingival hyperplasia. Which drug would be most likely to cause these effects?
a. Phenytoin
b. Carbamazepine
c. Phenobarbital
d. Ethosuximide
e. Valproicacid

8 -Which of the following drugs is used for the treatment of status epilepticus:
a. Diazepam
b. Clonazepam
c. Phenobarbital

9-All of the following matches regarding sedative-hypnotics are correct EXCEPT:
a. Thiopental is used for induction of anesthesia.
b. Midazolam can cause amnesia.
c. Phenobarbital has a wide margin of safety.

10-All of the following are correct matches regarding adverse effects EXCEPT:
a. Bromocriptine→Diarrhea
b. Levodopa→Arrhythmias
c. Amantadine→Confusion

11-Which of the following is not caused by antipsychotics:
a. Emesis
b. Amenorrhea
c. Dystonic reactions
d. Gynecomastia
e. Seizures

12-All of the following are correct effects regarding drugs of abuse EXCEPT:
a. Canabinoids→Vomiting
b. LSD→Flashbacks
c. cocaine→cardiac arrythmias

13 -Not followed by Extrapyramidal Syndrome:
a. Fluphenazine
b. Olanzapine
c. Haloperidol

14 -The antipsychotic drug blocking 5 HT receptors is :
a. Haloperidol
b. Loxapine
c. Quetiapine

15 -All of the following drugs are used to treat absence seizures except:
a. Ethosuximide
b. Gabapentin
c. Valproicacid
d. clonazepam

16 -wrong about sedative-hypnotics:
▪ doesn't affect learning function

17 -True about phenytoin and carbamazepine:
▪ they both induce metabolism of other drugs

18 -Incorrect adverse effect:
▪ Ethosuximide causes ataxia

19- A patient using a drug that leads to akathesia, which is most likely this drug:
▪ Respiridone

Answers

1	C	9	C
2	D	10	A
3	A	11	A
4	E	12	A
5	A	13	B
6	A	14	C
7	A	15	B
8	A		