

CNS

Anatomy

Quiz

- 1. Is the level of termination of spinal cord in new born**
- a. 1st lumber**
 - b. 3rd lumber**
 - c. 1st sacral vertebra**
 - d. 3rd coccygeal**

Answer: b



Quiz

2. Herniation of meninges, cerebrospinal fluid, spinal cord and/or spinal nerves is referred to as

- a. Spina bifida occulta**
- b. Spina bifida with meningomyelocele**
- c. Spina bifida with myelocele**
- d. Spina bifida with meningocele**
- e. Spinal dermal sinus**

Answer: b

Quiz

- 1. Regarding denticulate ligaments**
 - a. Part of dura matter**
 - b. Part of arachnoid mater**
 - c. Lies only in cervical region of spinal cord**
 - d. 21 in number**
 - e. Is the only support of spinal cord**

Answer: d

Quiz

The cerebellum is developed from one of the following brain vesicles

- A. The Prosencephalon
- B. The Telencephalon
- C. The Diencephalon
- D. The metencephalon
- E. The myelencephalon

Answer: D

Quiz

Which of the following sites the facial colliculus lie?

- A. Ventral aspect of pons
- B. Dorsal aspect of midbrain
- C. Ventral aspect of midbrain
- D. Dorsal aspect of pons
- E. Ventral aspect of medulla oblongata

Answer: D



Quiz

1. Superior cerebellar artery arises from
- a. Vertebral
 - b. Basilar
 - c. Internal iliac
 - d. External iliac
 - e. Subclavian

Answer: b



Quiz

2. Superior cerebellar peduncle connects cerebellum with

- a. Cerebrum**
- b. Midbrain**
- c. Pons**
- d. Medulla**
- e. Spinal cord**

Answer: b

Quiz

- 1. Foramina of Laushka connect**
- a. Lateral with 3rd ventricle**
 - b. 3rd with 4th ventricles**
 - c. 4th ventricle with central canal**
 - d. 4th ventricle with subarachnoid space**

Answer: d

Quiz

2. Foramen of Magendi connects

a. Lateral with 3rd ventricle

b. 3rd with 4th ventricles

c. 4th ventricle with central canal

d. 4th ventricle with subarachnoid space

Answer: d

Quiz

Which of the following is true as regards to the thalamus?

- A. The Thalamus has two ends and two surfaces
- B. Its Inferior surface is related to epithalamus.
- C. The metathalamus projects downward from its anterior end
- D. Its medial surface is related to the lateral ventricle.
- E. Its Lateral surface is related to the posterior limb of the internal capsule.

Answer: E

Quiz

Which of the following is true as related to of 3rd ventricle?

- A. The epithalamus forms its anterior wall
- B. The thalamus forms its posterior wall
- C. The hypothalamus forms the lower part of its lateral wall
- D. The subthalamus forms its inferior wall
- E. The metathalamus forms its posterior wall

Answer: C

Quiz

1. Fibers which connect the cerebral cortex with the subcortical areas

- a. Long association**
- b. Short association**
- c. Commissural**
- d. Projection**
- e. Forceps minor**

Answer: d



Quiz

2. Fibers which connect the two frontal lobes

- a. Long association**
- b. Short association**
- c. Forceps major**
- d. Projection**
- e. Forceps minor**

Answer: e

Quiz

1. Recent memory is the function of:

- a. Amygdaloid nucleus
- b. Hippocampus
- c. Septal area
- d. Mamillary body
- e. Anterior thalamic nucleus

Answer: b

Quiz

2. Aggression and fear is the function of:

- a. Amygdaloid nucleus
- b. Hippocampus
- c. Septal area
- d. Mamillary body
- e. Anterior thalamic nucleus

Answer: a

Quiz

1. Corpus striatum is supplied by

- a. Vertebral
- b. Basilar
- c. Internal carotid
- d. External carotid
- e. Subclavian

Answer: c

Quiz

1. Anterior limb of internal capsule lies between the lentiform nucleus and...

- a. Head of the caudate nucleus.
- b. Body of the caudate nucleus.
- c. Tail of the caudate nucleus.
- d. Thalamus
- e. Claustrum

Answer: a



Quiz

1. Is the main arterial supply of internal capsule

- a. Vertebral
- b. Basilar
- c. Internal carotid
- d. External carotid
- e. Subclavian

Answer: c





Quiz

Which of the following form the lateral wall of anterior horn of lateral ventricle?

- A. Body of the caudate nucleus
- B. tail of caudate the nucleus
- C. Body of the fornix
- D. Septum pellucidum
- E. head of the caudate nucleus

Answer:



Quiz

Which of the following is true as regards to the cerebrospinal fluid?

- A. The main site of its formation is arachnoid villi and granulations.
- B. The main factor facilitates the CSF circulation is pulsations of the arteries in the subdural space
- C. The choroid plexus is the main source of the CSF (70%), Mostly in the lateral ventricle.
- D. The ependymal cells are the main source of the CSF (70%), Mostly in the third ventricle
- E. CSF is similar to blood plasma although it contains more albumin and glucose.

Answer:

Quiz

1. Nucleus solitarius is responsible for which sensation

- A. Taste
- B. Equilibrium
- C. Proprioception
- D. Pain and temperature
- F. Touch

Answer: A

Quiz

1. Nucleus Ambiguous is a motor nucleus for which cranial nerve

- A. 3rd & 4th
- B. 5th & 6th
- C. 7th & 9th
- D. 9th, 10th & 11th
- F. 10th, 11th & 12th

Answer: D

Quiz

1. Paralysis of muscles of mastication on the same side of the head is caused by lesion of which cranial nerve?

- A. 3rd
- B. 5th
- C. 7th
- D. 9th
- E. 11th

Answer: B

Quiz

2. Which of the following ganglia is related to lingual nerve?

- A. Ciliary
- B. Submandibular
- C. Pterygopalatine
- D. Otic
- E. Geniculate

Answer: B

Quiz

1. **40%** of the corticobulbar fibers from
- A. lower third of primary motor area 4**
 - B. Upper two thirds of primary motor area 4**
 - C. Premotor area**
 - D. General sensory area**

Answer: A



Quiz

2. **40%** of the corticospinal fibers from
- A. lower third of primary motor area 4**
 - B. Upper two thirds of primary motor area 4**
 - C. Premotor area**
 - D. General sensory area**

Answer: A



Quiz

Which of the following best describes the internal carotid artery?

- A. One of two terminal branches of external carotid artery
- B. It supplies the occipital lobes and the brain stem
- C. It connects with the posterior cerebral artery through anterior communicating artery
- D. It connects with the posterior cerebral artery through posterior communicating artery
- E. It has a straight course along its length

Answer:

M N U



Quiz

1. Lateral squint and ptosis of left eye is caused by lesion of which cranial nerve?

- A. Left 3rd
- B. Left 6th
- C. Right 3rd
- D. Right 6th
- E. Left 4th

Answer: A

Quiz

2. Medial squint of left eye is caused by lesion of which cranial nerve?

- A. Left 3rd
- B. Left 6th
- C. Right 3rd
- D. Right 6th
- E. Left 4th

Answer: D

Quiz

Which of the following related to **hypoglossal nerve**?

- A. It is a mixed nerve.
- B. It exits from the post-olivary fissure.
- C. It supplies all muscles of the tongue except palatoglossus muscle.
- D. It arises from the upper five or six cervical segments of the spinal cord
- E. Its lesion results in paralysis of muscles of the larynx causes hoarseness of voice.

Answer:

M N U



Quiz

Which of the following related to **glossopharyngeal nerve**?

- A. It supplies all muscles of the tongue except palatoglossus muscle.
- B. It exits from the pre-olivary fissure.
- C. Its lesion results in paralysis of muscles of the larynx causes hoarseness of voice.
- D. Its motor nucleus arises from middle part of nucleus ambiguous.
- E. Its parasympathetic nucleus(inferior salivatory nucleus supplies the parotid gland.

Answer:

Physio

• Which of the following correctly describes receptor potential?:

- A. It follows all-or-none law
- B. It cannot be summated
- C. It is a graded potential
- D. It is generated only in motor neurons
- E. It is an action potential



• Which sensory receptor is involved in proprioception.

A. Golgi tendon organs

B. Meissner's corpuscles

C. Merkel cells

D. Nociceptors

E. Baroreceptors



The sites of gate theory for pain control is located at:

- a) Periventricular hypothalamic nucleus
- b) Periaqueductal gray area (PAG)
- c) Nucleus raphe magnus
- d) SGR of spinal cord
- e) Locus coeruleus



Which of the following is a group of neurons in pain suppression pathway that utilizes enkephalin as a neurotransmitter:

- A. Limbic system**
- B. Periventricular hypothalamic nucleus**
- C. Periaqueductal gray area (PAG)**
- D. Nucleus raphe magnus**
- E. Locus coeruleus**



After discharge :

- a) Can be caused by lateral inhibition.
- b) Can be caused by parallel circuits.
- c) Is due to presence Renshaw cells.
- d) Leads to spread of the stimulus.
- e) Lead to feedback inhibition.



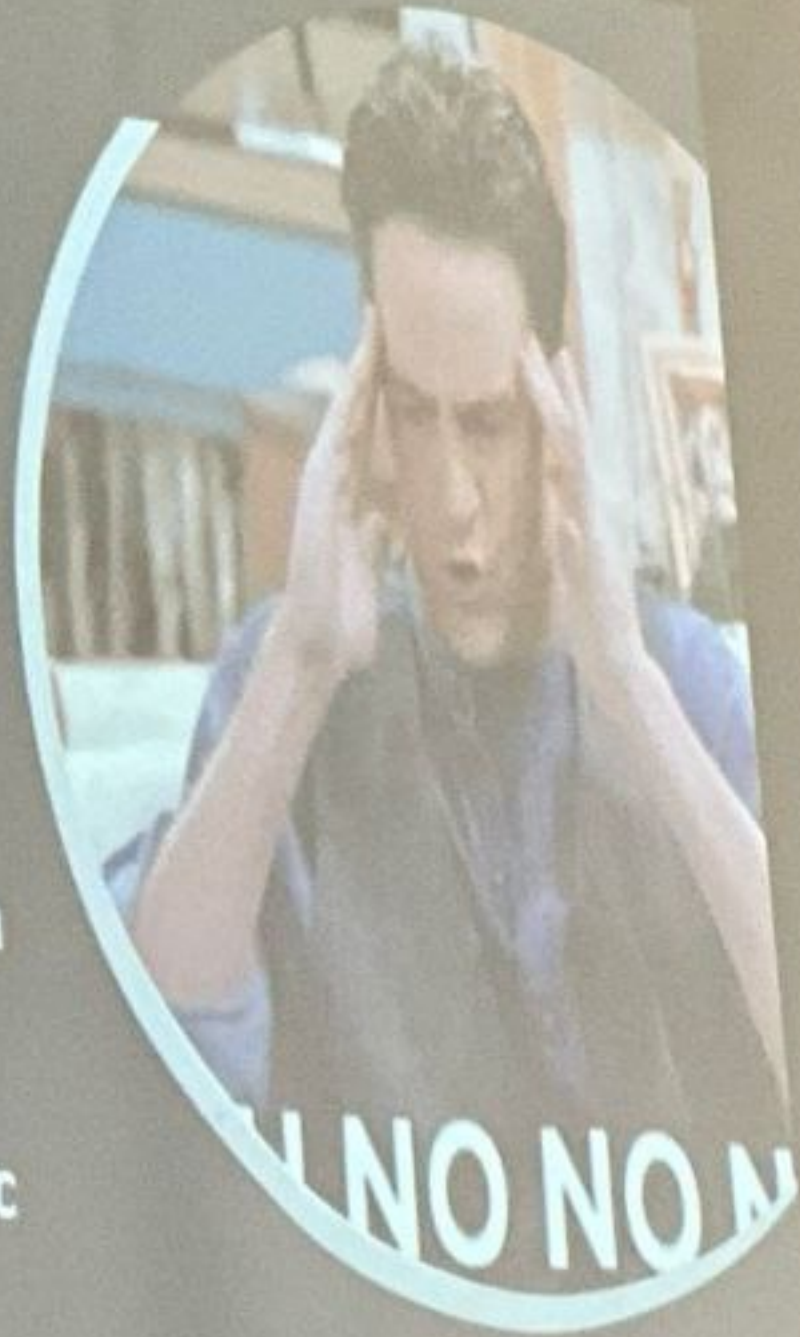
RAS system depends on its function mainly on:

- A) Projection mechanism.**
- B) Fasciculation along the pathway.**
- C) Lateral inhibition.**
- D) Reverberating circuit.**
- E) Recurrent inhibition.**



Umn1 tract results in which
of the following symptoms?:

- A) Involuntary tremors
- B) Hyperreflexia and spastic
paralysis
- C) Loss of proprioception
- D) Impairment of pain
sensation
- E) Reduced autonomic
functions



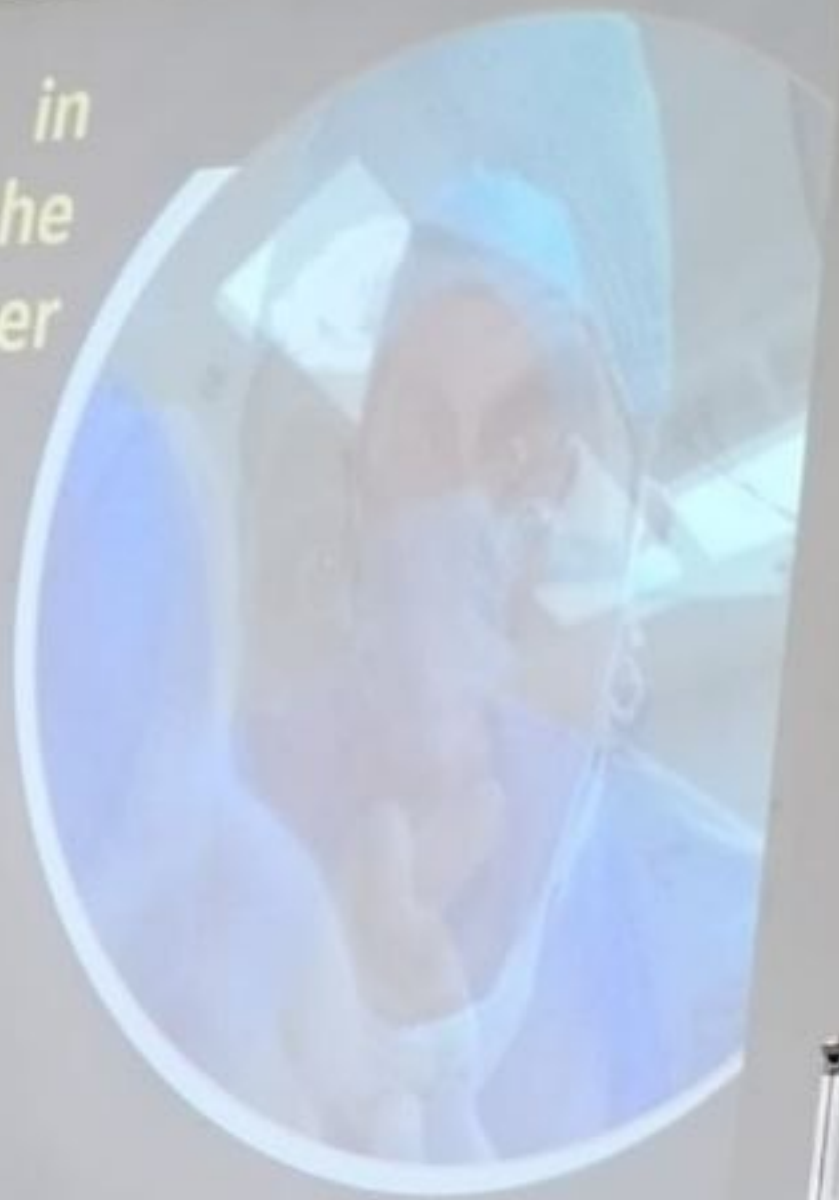
What is the main function of the primary motor cortex (area 4):

- A) Planning complex movements
- B) Regulating muscle tone
- C) Controlling fine voluntary movements of distal muscles
- D) Coordinating involuntary postural adjustments
- E) Processing sensory input



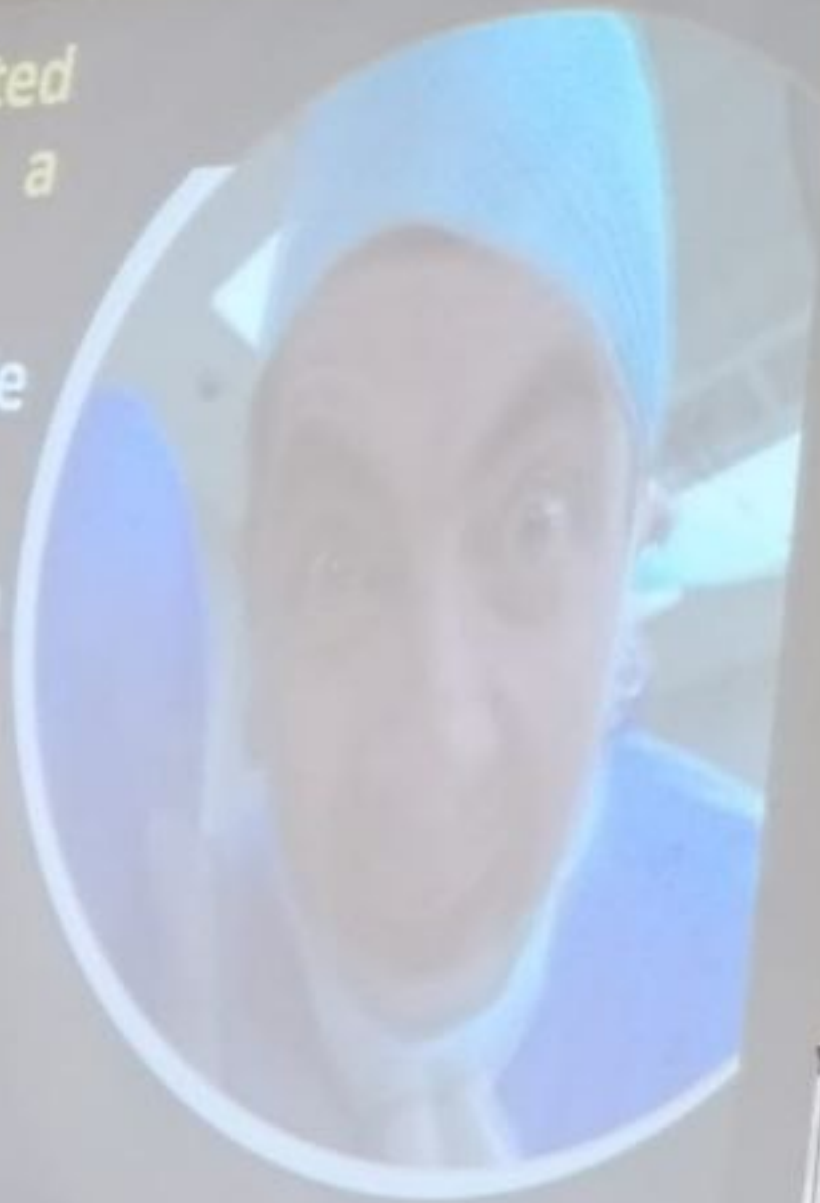
The main structure in
the production of the
total refractive power
of the eye is:

A) The cornea



Astigmatism is corrected mainly by wearing a cylindrical lens because:

- A) It covers the whole curvature of the cornea.
- B) It corrects only on a specific plane.
- C) The curvature of the cornea is the same in all direction.
- D) It is a part of a sphere like the eye.
- E) It has high dioptric power.



Where do most of the optic tract fibers terminate?

- A) Pretectal nucleus
- B) Hypothalamus
- C) Cerebellum
- D) Lateral geniculate body
- E) Spinal cord



Which retinal cells act as lateral inhibitory pathways in the retina?

- A) Bipolar cells
- B) Pigmented cells
- C) Ganglion cells
- D) Horizontal cells
- E) Photoreceptor cells



Q) which neurotransmitter is released by subthalamic nuclei to excite the globus pallidus interna?

A. GABA

B. Dopamine

C. Glutamate

D. Acetylcholine

E. Serotonin

**Q)Which structure in basal ganglia
secrets dopamine ?**

A.caudate nucleus

B.putamen

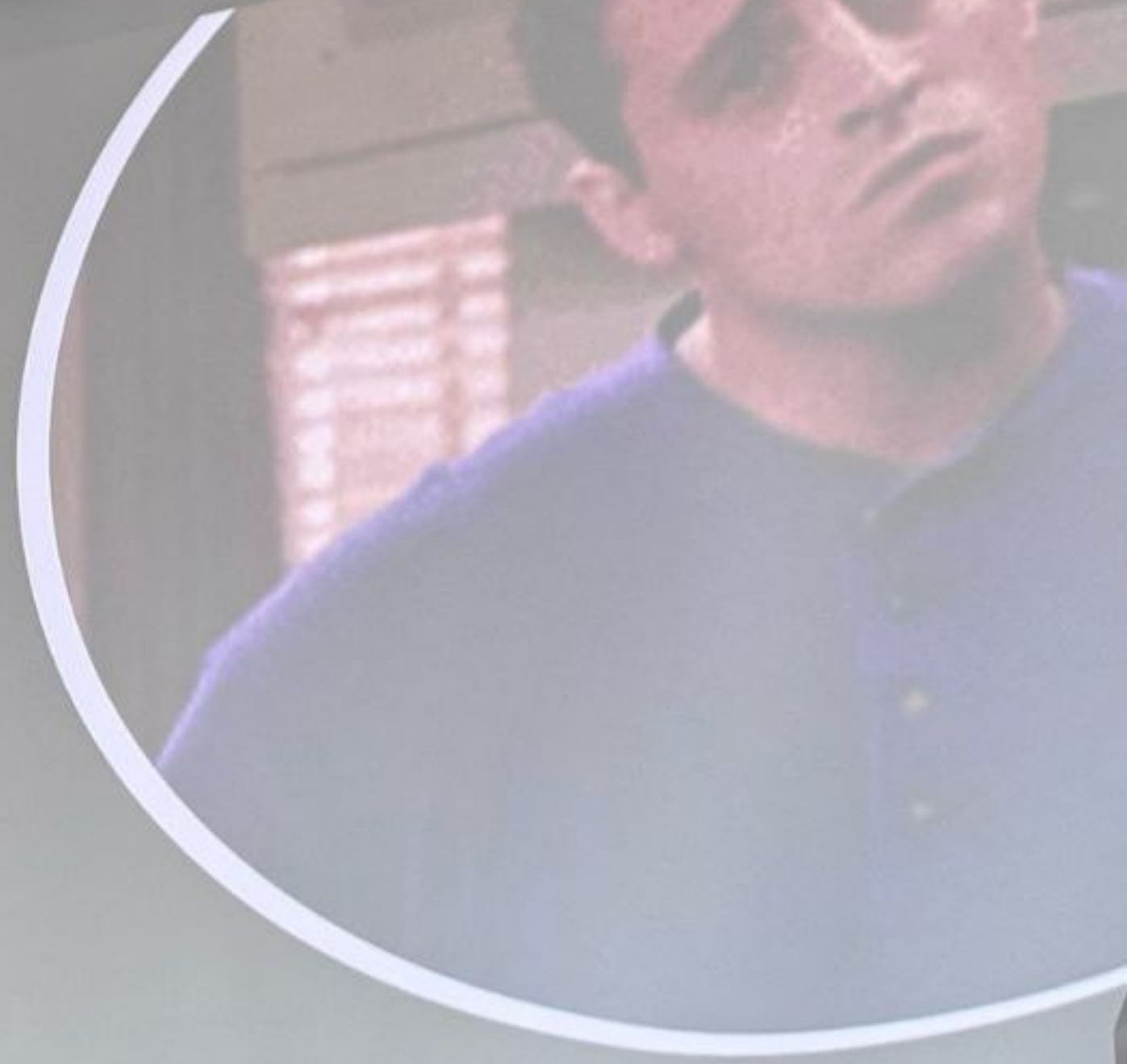
C. globus pallidus

D.Substantia nigra pars compacta

E. subthalammic nuclei

Which brain wave pattern is characteristic of REM sleep?

- A) Delta waves
- B) Alpha waves
- C) Theta waves
- D) Gamma waves
- E) Beta waves**



What mechanism is responsible for short-term memory formation?

- A) Synaptic pruning
- B) Protein synthesis
- C) Reverberating circuits
- D) Dendritic spine modification
- E) Hippocampal atrophy



Histo



MCQ Time

Which of the following ossicles closes the oval window:

- A. Malleus**
- B. Incus**
- C. Stapes**



The middle ear is lined with:

- A. Simple squamous epithelium**
- B. Simple cubical epithelium**
- C. Stratified squamous epithelium**



MCQ Time

The outer hair cells of the organ of corti arranged in:

- A. 1 row**
- B. 3-5 rows**
- C. 8 rows**



The cochlear duct doesn't contain:

- A. Endolymph**
- B. Perilymph**
- C. Organ of corti**



MCQ Time

Meissner's Corpuscles:

- a. are found in dermal papillae.**
- b. are numerous in intermuscular septa.**
- c. Have no C.T. capsule.**
- d. Their long axis is parallel to skin surface.**
- e. are stretch receptors.**





MCQ Time

Pacinian corpuscles are:

- a. found at dermo-epidermal junction.**
- b. few in fingers & external genitalia.**
- c. supplied by 2-9 spiral nerve branches.**
- d. formed of modified Schwann cells & collagen.**
- e. thermoreceptors.**



Micro

Case scenario, Clinical Correlate

65 year old male patient, came to the E.R. presented with a very high fever & stiffness of neck that started in the morning he also complained of nausea and vomiting. Upon clinical examination, the patient was positive for both Brudzinski's and Kernig's sign. CSF sample showed, Turbid appearance, High PMNs, elevated protein & low glucose levels.

What is the clinical diagnosis of this case?

What is the proper sample for diagnosis ?

What is the laboratory methods for diagnosis?

Q 1

Meningitis is inflammation of the membranes surrounding the-----.

- a) lung**
- b) spleen**
- c) stomach**
- d) Brain and spinal cord**

Q 2

The following simple test is diagnostic of *Neisseria meningitides*:

- a. Detection of gram negative diplococcic
- b. Culture on ordinary medium
- c. Oxidase negative
- d. PCR for CSF
- e. Detection of antigen by ELISA

Q 3

A surface protein of Listeria which start epithelial cell invasion is called:

- a. Internalin**
- b. Haemolysin**
- c. Listeriocin**
- d. IgA protease**
- e. endotoxin**

Case scenario:

A 16 year-old boy presented with a one week history of sore throat, fever and profound fatigue. Physical examination revealed a fever of 39.5oC, cervical lymphadenopathy, exudative pharyngitis and mild hepatosplenomegaly. His WBCs was 12.500/ μ l with 20% neutrophils, 24% monocytes, 42% lymphocytes, 12% atypical lymphocytes. A rapid serologic test performed at physician office revealed the presence of heterophil antibodies.

Questions:

- **What is the cause of this body illness?**
- **Define the most likely case diagnosis?**
- **What is the most likely causative organism?**
- **Identify the pathogenesis of the causative organism?**

MCQ:

Pustular lesion of skin of finger or hand of medical personnel is called:

- ☒ a. Herpetic whitlow
- b. Herpes labialis
- c. Shingles
- d. Cold sores
- e. Fifth disease

MCQ:

The following is not a character of varicella:

- a. mild febrile illness
- b. vesicular rash.
- c. Rash starts on trunk
- d. Spreads to limb and face
- ☒ e) Rash appear in stages with every lesion present alone.

MCQ:

This virus is the most infectious:

- a. Rubella
- b. CMV
- c. Poliomyelitis
- ☒ d. Measles
- e. Epstein-Barr

Question 1

Define secondary viral encephalitis and mention its causes.

- **Secondary viral encephalitis:** a viral infection first occurs elsewhere in the body then travels to the brain. May results from a faulty immune system reaction to an infection elsewhere in the body (post-infection encephalitis) .
- **Causes:**
 - 1- Rubella virus.
 - 2- Measles virus.
 - 3- Herpes zoster virus.

Question 2

Eastern equine encephalitis virus is the causative agent of

- a. Pneumonia.
- b. Primary encephalitis.
- c. Secondary encephalitis.
- d. Syphilis.
- e. Dermatitis.

b. Primary encephalitis.

Question 3

Rabies virus belongs to

- a. Orthomyxoviruses.
- b. Paramyxoviruses.
- c. Rhabdoviruses.
- d. Togaviruses.
- e. Arenaviruses.

c. Rhabdoviruses.

Case Report

A 36-year-old man was **bitten by his unvaccinated dog** and had a deep laceration on the right leg. A week later the man developed fever, headache, and malaise. Three days later, he had **agitation, confusion, photophobia, and hydrophobia**. On examination, neck rigidity was absent with muscle **spasms in all limbs**.

Questions

- Define the most likely case diagnosis?
- What is the most likely causative organism?
- What is the morphology of the causative organism?
- Identify the pathogenesis of the causative organism?
- Describe the laboratory diagnosis of this case.
- What is the appropriate treatment of this case?



Q4

- The appropriate media for the recovery of fungi is

- a) MacConkey agar.
- b) Nutrient agar.
- c) Sabouraud dextrose agar.
- d) CLED agar

a) Sabouraud dextrose
agar.



Q3

- The common source of infection in candidiasis is the
- a) Surrounding environment.
- b) Other patients.
- c) Patient's own flora

a) Patient's
own flora



Q4

- A female complains of a white vaginal discharge & itching. Laboratory examination of the discharge reveals yeasts & pseudohyphae, what is the most likely diagnosis?
 - a) Aspergillosis.
 - b) Candidiasis.
 - c) Cryptococcosis.
 - d) Histoplasmosis



Question

- Which of the following statements about the hyphae of Mucorales fungi is true?

- a) They are heavily septate
- b) They are narrow and branched
- c) They are pigmented
- d) They are unicellular
- E) They are broad and non-septate

E) They are broad and non-septate



Question

- Which of the following structures is most commonly observed in histopathological examination of tissues affected by mucormycosis?

- A) Yeast cells
- b) Pseudohyphae
- c) Hyphal fragments
- d) Cystic structures
- e) Sporangia

e) Sporangia



Case scenario

- A 45-year-old diabetic male presents to the emergency room with severe facial pain, fever, and black necrotic lesions on the palate and nasal mucosa. He reports a recent history of sinusitis that did not respond to antibiotics. On examination, there is extensive tissue necrosis in the affected areas, and nasal endoscopy reveals black eschars. A biopsy confirms the presence of broad, non-septate hyphae consistent with Mucorales fungi.
- **What is the probable diagnosis?**

Para



Case Scenario



A 63-year-old male with a history of kidney transplantation presented to the Emergency Department for altered mental status. Imaging of the head with CT showed an enhancing lesion suspicious for brain abscess. Biopsy of the lesion showed 20-40 μm amoeboid trophozoite with multiple spiky pseudopodia and 20 μm rounded cyst with double walls.

What is the most likely parasitic diagnosis?



Q: Which parasite or parasites may have caused this condition?

- a. Neurocysticercosis
- b. African trypanosomiasis
- c. Trichomoniasis
- d. Secondary amoebic abscess
- e. Naegleriasis

MCQ1: Which infection can be transmitted via swimming in contaminated pool?

- a) primary amoebic meningoencephalitis
- b) Granulomatous amoebic meningo-encephalitis
- c) Onchocerciasis
- a) Secondary amoebic meningoencephalitis
- d) Neurocysticercosis

Answer: a) primary amoebic meningo-encephalitis

MCQ 2: Patient developed cerebral space occupying lesion symptoms after ingesting nauseating drug, his stool examination showed Taenia egg.

What is the suspected cerebral lesion?

- a. Sleeping sickness
- b. Primary amoebic meningo-encephalitis
- c. Neurocysticercosis
- d. Onchocerciasis
- e. Granulomatous amoebic meningo-encephalitis

Answer: c. Neurocysticercosis



Case Scenario



Patient presented with enlarged cervical lymph nodes, **hepato-splenomegaly**, fever and generalized weakness. The condition started when he went for a trip in **Africa**, where he was exposed to numerous **insect bites**. He had a history of having indurated painful **swelling** on his face before his complaints. Then, he suffered fever, chills, aches, night sweats, and nausea. After that he developed cognitive deterioration, ataxic gait and **sleepiness**.

What is the most likely parasitic diagnosis?

MCQ 1: Patient went to Africa and subjected to numerous insect bites. He developed enlarged cervical lymph nodes, hepato-splenomegaly, cognitive deterioration, ataxic gait, and finally sleepiness.

What is the most likely parasitic diagnosis?

- a) primary amoebic meningoencephalitis
- b) African trypanosomiasis
- c) Onchocerciasis
- a) Secondary amoebic meningoencephalitis
- d) Neurocysticercosis

MCQ 2: What is the most common early ocular finding in Onchocerca volvulus infection?

- a) blindness
- b) optical atrophy
- c) keratitis
- d) conjunctivitis with photophobia
- e) iritis

MCQ 3: Which stage is the infective stage of *Trypanosoma brucei*?

- a) Metacyclic trypomastigote
- b) Intermediate trypomastigote
- c) amastigote
- d) Long slender trypomastigote
- e) promastigote

Patho

Now....Answer this

Which of the following characterizes Arnold-Chiari malformation type II?

- A. Low-lying cerebellar tonsils into the vertebral canal.
- B. A central fluid filled cavity in the spinal canal.
- C. Enlarged posterior fossa with large midline cyst.
- D. Extension of cerebellar vermis into the foramen magnum.
- E. Sac-like protrusion of malformed brain tissue and membranes via defect.

Now....Answer this

A 3-month-old female infant was presented to the pediatrician by abnormally increased head circumference, thin skull bones, wide fontanelles and separate skull sutures. Neurologic examination revealed affected neurologic status. What is the most-likely cause for this condition?

- a. Choroid plexus carcinoma
- b. Atrophic loss of brain tissue
- c. Superior sagittal sinus thrombosis
- d. Narrowing (stenosis) of aqueduct of Sylvius
- e. Post-inflammatory fibrosis of arachnoid granulations

Now....Answer this

Which of the following CNS infective organisms is characterized by the presence of Cowdry type A bodies in the neurons and glial cells of the brain?

Rabies

AIDS

Prion

Strep. H.

Herpes simplex virus (HSV) type 1

Now....Answer this

In focal cerebral ischemia (infarction), which of the following is less likely to be affected?

- A. Basal ganglia.
- B. Thalamic nuclei.
- C. The deep white matter.
- D. Submeningeal cortex.
- E. Deep nuclei.

Now....Answer this

Match the following astrocytoma grade with microscopic feature:

1. *GII* diffuse astrocytoma
2. *GIII* anaplastic
3. Glioblastoma

- a. perivascular rosettes
- b. Hypercellularity & pleomorphism only
- c. Pleomorphism & mitosis
- d. Vascularity & necrosis
- e. Psamoma bodies

Now....Answer this

Match the following intracranial tumor & feature:

1. Meningioma

2. Medulloblastoma

3. Oligodendroglioma

a. Calcification

b. Localized tumor

c. arise in the 4 th ventricle

d. Nerve tumor

e. Psammoma bodies

Now....Answer this

Which of the following is a microscopic feature of retinoblastoma:

- a. perivascular rosettes.
- b. Hypercellularity & pleomorphism.
- c. Pleomorphism & mitosis.
- d. Small round cells.
- e. Psammoma bodies.

Now....Answer this

Cholesteatoma is characterized by which of the following?

- a) Accumulation of fluid in the middle ear
- b) Commonly affect children
- c) Excess suppuration
- d) Bone inflammation with erosion
- e) Accumulation of secretions in the middle ear

Pharma

Quiz 1

Which of the following is long-acting benzodiazepine ?

- A. Alprazolam
- B. Lorazepam
- C. Temazepam
- D. Diazepam**
- E. Midazolam

Quiz 2

A 68-year-old woman was prescribed diazepam one in the morning for anxiety by her physician. After following the regimen, she found that she had problems going to sleep, and without consulting her physician, she began to take another diazepam pill at night. She continued taking two diazepam pills for the next few days. Her friends found her disorientated and call her doctor who told her to stop taking the second pill of diazepam at night; **which of the following is the best alternative for the second pill to as hypnotic ?**

- A. Zolpidem
- B. Temazepam
- C. Phenobarbital
- D. Thiopental

Quiz 1

Which one of the following combinations of antiparkinsonian drugs is an appropriate treatment plan?

- A. Amantadine, carbidopa, and entacapone.
- B. Levodopa, carbidopa and entacapone.**
- C. Pramipexole, carbidopa, and entacapone.
- D. Ropinirole, selegiline, and entacapone.
- E. Ropinirole, carbidopa, and selegiline.

Quiz 2

Which one of the following antiparkinsonian drugs may cause vasospasm?

A. Amantadine.

B. Bromocriptine.

C. Carbidopa.

D. Entacapone.

E. Ropinirole.

Quiz 3

Early-stage female experienced a minor fall (3 months ago) after tripping over her dog and landed on an outstretched right hand, leading to wrist pain, also complained of some recent trouble with balance and a small hand tremor. She was referred to a neurologist and diagnosed with early-stage idiopathic Parkinson's disease

What is the proper treatment of this patient?

Answer

- **Sustained-release carbidopa-levodopa is considered first-line treatment for these patients.**
- **Inadequate response can be handled by a trial of immediate-release carbidopa-levodopa and then addition of a dopamine agonist when maximum levodopa doses are reached.**

Q

P.K. is a well-known drug addict. When he came to your office for his last visit, you noted that he had “pinpoint” pupils and decreased respiration and heart rate. These effects are likely the result of:

- a. Morphine-activating μ receptors.
- b. Oxycodone-activating κ receptors.
- c. Methadone-activating κ receptors.
- d. Naloxone-activating μ receptors.
- e. Buprenorphine-activating δ receptors.

Q

A 32-year-old homeless woman was found unresponsive with a needle in her arm. The response team quickly administered a dose of naloxone to:

- a. Desensitize opioid receptors.
- b. Antagonize the ability of opioids to cross the blood-brain barrier.
- c. Competitively inhibit opioid-induced respiratory depression.
- d. Stimulate the hepatic metabolism of the opioids.
- e. Counteract opioid-induced constipation.



A 6-year-old girl and her mother come to see you because the girl's teacher observed episodes of staring and inability to communicate. These episodes last 3–5 seconds and occur 10–20 times during the school day. An EEG shows synchronized three-per-second spike-wave discharges generalized over the entire cortex. Which antiepileptic medication would you try first in this young girl?

- A. Phenytoin
- B. Clonazepam
- C. Primidone
- D. Carbamazepine
- E. Ethosuximide



Of the list below, which is the safest antiepileptic drug to take during pregnancy?

- A. Sodium valproate.
- B. Carbamazepine.
- C. Lamotrigine.
- D. Phenytoin.
- E. Midazolam.

Psychiatry

- **What is the global capacity of an individual ?**
- a) Ability to speak multiple languages
- b) Ability to act purposefully, think rationally, and deal effectively with the environment
- c) Ability to solve complex mathematical problems
- d) Ability to create and understand sounds
- e) Ability to control bodily motions skillfully
- **Model Answer: b) Ability to act purposefully, think rationally, and deal effectively with the environment**

- **Which component of intelligence involves the use of pitch, rhythm, and the ability to create and understand sounds?**
- a) Logical-mathematical
- b) Spatial
- c) Musical
- d) Interpersonal
- e) Intrapersonal
- **Model Answer: c) Musical**

- **What is the incidence of mental retardation, as mentioned in the text?**
- a) 5%
- b) 3%
- c) 1%
- d) 10%
- e) 20%
- **Model Answer: c) 1%**

QUIZ

- What is the process of putting information into memory known as?
 - a) Retrieval
 - b) Storage
 - c) Encoding
 - d) Repression
 - e) Forgetting
-
- **Answer: c) Encoding**

- What type of memory is responsible for storing information about the world and general knowledge?
- a. Sensory memory
- b. Short-term memory
- c. Procedural memory
- d. Semantic memory
- e. Episodic memory

• **Model Answer: d. Semantic memory**

- Which part of the brain is primarily associated with memory and is involved in forming new memories?

- a. Amygdala
- b. Temporal Lobe
- c. Mammillary Bodies
- d. Medial Frontal Gyrus
- e. Hippocampus

- **Model Answer: e. Hippocampus**