

# Anatomy

**1- The promontory of tympanic cavity is seen on -----?**

- a- The medial wall
- b- The roof
- c- The posterior wall
- d- The floor
- e- The anterior wall

**2- The face contains the followings EXCEPT?**

- a- Sebaceous glands
- b- Deep fascia
- c- Sweat glands
- d- Loose connective tissue
- e- Muscles

**3- Which of the following extraocular muscles is CORRECTLY matched with its nerve supply?**

- a- Medial rectus and abducens nerve
- b- Superior rectus and oculomotor nerve
- c- Inferior rectus and trigeminal nerve
- d- Lateral rectus trochlear nerve
- e- Superior oblique and oculomotor nerve

**4- All the followings are branches of phrenic nerve EXCEPT?**

- a- Right copula of diaphragm
- b- Right suprarenal gland
- c- Left copula of diaphragm
- d- Left suprarenal gland
- e- Central tendon of diaphragm

**5- Aphonia results from injury to?**

- a- Pharyngeal branches of vagus nerve

- b- Recurrent laryngeal nerve
- c- Glossopharyngeal nerve
- d- Spinal accessory nerve
- e- Both recurrent laryngeal nerves

**6- The followings occur in the Accommodation Reflex EXCEPT?**

- a- Contraction of the medial recti
- b- The lens thickens
- c- Contraction of the Ciliary muscle
- d- Increase refractive power of the lens
- e- The pupils dilated

**7- The fibers of the optic nerve: Select the INCORRECT one?**

- a- They converge on the optic disc and exit from the eye to the temporal side of its center
- b- They leave the orbital cavity to the middle cranial fossa
- c- Are the axons of the cells in the ganglionic layer of the retina
- d- The optic nerve unites with the opposite side to form the optic chiasma
- e- The optic nerve leaves the orbital cavity through the optic canal

**8- All following nerves supply the scalp EXCEPT?**

- a- Supraorbital
- b- Auriculotemporal
- c- Zygomaticofacial
- d- Supratrochlear
- e- Temporal

**9- The actual socket for the eyeball is -----?**

- a- The bony cavity of orbit
- b- Tenon's capsule
- c- The episcleral space
- d- The sclera
- e- The orbital fat

**10- The nasociliary nerve supplies the followings EXCEPT?**

- a- Nasal cavity
- b- Ethmoid sinus
- c- Cornea
- d- Lower eyelid
- e- Tip of the nose

**11- One of the following isn't function of the facial nerve?**

- a- Secretomotor to parotid gland
- b- Somatic sensation to the skin of the concha of the auricle
- c- Secretomotor to lacrimal gland
- d- Taste sensation from the anterior two thirds of the tongue and soft palate
- e- Supplies the posterior bellies of the digastric

**12- All the followings are branches of cervical plexus EXCEPT?**

- a- Lesser occipital
- b- Supraclavicular
- c- Nerve to levator scapula
- d- Greater occipital
- e- Great auricular nerve

**13- Which of the following is WRONG regarding the trigeminal nerve?**

- a- It leaves the anterior aspect of the pons
- b- Has small motor root and a large sensory root
- c- The trigeminal ganglion is motor
- d- Pass in the posterior and middle cranial fossae
- e- Is the largest cranial nerve

**14- "The white of the eye" is -----?**

- a- The cornea
- b- The choroid
- c- The iris

d- The anterior part of the sclera

e- The ciliary body

**15- The three divisions of the trigeminal nerve supply the followings EXCEPT?**

a- The mouth

b- The upper eyelid

c- The angle of the mandible

d- Paranasal air sinuses

e- The lateral side of the orbital opening

**16- The gustatory cortex is located within the ----- lobe?**

a- Temporal

b- Parietal

c- Occipital

d- Frontal

e- Limbic

**17- Which of the following is the best position to examine the function of inferior oblique muscle?**

a- Elevation in abducted position

b- Depression in abducted position

c- Depression in adducted position

d- Elevation in adducted position

e- Depression in vertical position

**18- Glossopharyngeal Nerve CN IX has the following functions EXCEPT?**

a- Visceral (Parasympathetic) Motor

b- Proprioceptive fibers

c- Somatic (General) Sensory

d- Somatic (Branchial) Motor

e- Special Sensory (Taste)

**19- All the followings are layers of scalp EXCEPT?**

a- Skin

- b- Tough areolar tissue
- c- Connective tissue
- d- Pericranium
- e- Galea aponeurotica

**20- Nuclei of the facial nerve include the followings EXCEPT?**

- a- The superior salivatory nucleus
- b- The lacrimal nucleus
- c- Main Motor Nucleus
- d- The nucleus of the tractus solitarius
- e- Edinger-Westphal nucleus

**21- The first branch of ophthalmic artery is? anatomy**

- a- Supraorbital artery
- b- Posterior ethmoidal artery
- c- Central artery of the retina
- d- Supratrochlear artery
- e- Ciliary arteries

**22- The suspensory ligaments attach to the?**

- a- Lens
- b- Sclera
- c- Canal of Schlemm
- d- Iris
- e- Optic disc

**23- The facial artery ?**

- a- Arises from the external carotid artery
- b- Arises from the subclavian artery
- c- Arises from the vertebral artery
- d- Arises from the internal carotid artery
- e- Arises from the common carotid artery

**24- The point of sharpest retinal vision is called the?**

- a-Fovea centralis
- b-Macula lutea
- c-Vitreous body
- d-Optic disk
- e-Choroid

**25-What is the dangerous layer of the scalp?**

- a-Skin
- b-Loose areolar tissue
- c-Connective tissue
- d-Pericranium
- e- Galea aponeurotica

**26- The facial vein is connected to the cavernous sinus mostly by means of ?**

- a-The retromandibular vein
- b-The supratrochlear vein
- c-The inferior labial vein
- d-The posterior auricular vein
- e-The superior ophthalmic vein

**27-The blind spot?**

- a-The macula lutea
- b-The fovea centralis
- c-The optic disc
- d-Sensitive to light
- e-The yellow spot

**28-Stimulation of the greater splanchnic nerve results in?**

- a-Bronchodilation
- b-Relaxation of ciliary muscle during far vision
- c-Urine retention

d-Catecholamine secretion

e-Increased heart rate

**29-Which of the following nerve supplies the scalp is motor?**

a-Supraorbital

b-Auriculotemporal

c-Zygomaticofacial

d-Supratrochlear

e-Temporal

**30-The followings take part in corneal reflex EXCEPT?**

a-The ophthalmic division of the trigeminal nerve

b-Afferent impulses from the cornea or conjunctiva

c-Sensory nucleus of the facial nerve

d-The orbicularis oculi muscle

e-internuncial neurons

**31-The phrenic nerve arises mainly from ?**

a-C1

b-C2

c-C3

d-C4

e-C5

**32-Facial nerve (CN VII) emerges from the cranium via ?**

a-Internal acoustic meatus

b-Jugular foramen

c-External acoustic meatus

d-Carotid canal

e-The stylomastoid foramen

**33- Regarding the otic ganglion: Select the WRONG statement?**

a-Is a parasympathetic ganglion

- b-Is located medial to the mandibular nerve
- c-The preganglionic fibers reach the ganglion via the lesser petrosal nerve
- d-The preganglionic fibers originate in the glossopharyngeal nerve
- e-The postganglionic secretomotor fibers reach the lacrimal gland

**34- The oval window. Select the INCORRECT one?**

- a-Above and behind the promontory
- b-Closed by the base of the stapes
- c-On the medial side of the window is the perilymph of the scala vestibuli
- d-Found on the lateral wall of the inner ear
- e-Closed by the secondary tympanic membrane

**35- Aqueous and vitreous humors are divided by?**

- a-Lens
- b-Iris
- c-Retina
- d-Optic nerve
- e-Cornea

**36-Which of the last branch of ophthalmic artery arises?**

- a-Supraorbital artery
- b-Posterior ethmoidal artery
- c-Central artery of the retina
- d-Supratrochlear artery
- e-Dorsal nasal artery

**37-Which of the followings nerves arise from dorsal ramus?**

- a-Lesser occipital
- b-Supraclavicular
- c-Nerve to levator scapula
- d-Greater occipital
- e-Great auricular nerve

**38-The Ciliary body provides attachment for ?**

- a-The lens
- b-The corneoscleral junction
- c-The iris
- d-The limbus
- e-The cornea

**39-Which of the following is TRUE regarding the facial nerve?**

- a-Pure motor
- b-Doesn't carry parasympathetic fibers
- c-Damage to CN VII is common with fracture of the occipital bone
- d-Related to medial wall of the tympanic cavity
- e-The geniculate ganglion of the nerve is motor ganglion

**40-The branches of the posterior division of the mandibular nerve are the following EXCEPT?**

- a-Inferior alveolar nerve
- b-The buccal nerve
- c-Auriculotemporal nerve
- d-Mylohyoid nerve
- e-Lingual nerve

**41-Which of the following is FALSE regarding the Characteristics of the cranial nerves supplying the extraocular muscles?**

- a-Abducent nerve has the longest intracranial course
- b-Abducent nerve is the thinnest
- c-Trochlear nerve originates from the dorsal aspect of the brainstem
- d>Oculomotor nerve supplies the medial rectus muscle
- e>Oculomotor nerve supplies the superior oblique muscle

**42-One of the followings is INCORRECT regarding the trigeminal neuralgia?**

- a-The patient experiences excruciating pain
- b-Relatively common condition

c-Common in the distribution of the mandibular division

d-Common in the distribution of the ophthalmic division

e-Common in the distribution of the maxillary division

**43-The maculae can be found in the ?**

a-Cochlear duct

b-Sacculle

c-Semicircular canal

d-Semicircular ducts

e-Middle ear

**44-A person goes to ophthalmologist. He has a problem of reading books because he is not able to contract his ?**

a-Iris

b-Suspensory ligament

c-Pupil

d-Ciliary muscles

e-Retina

**45-Which is WRONG regarding the hypoglossal nerve?**

a-Is a motor and sensory nerve

b-Crosses the posterior cranial fossa

c-Controls the shape and movements of the tongue

d-Leaves the skull through the hypoglossal canal.

e-It is joined by C1 fibers from the cervical plexus

**46-The facial vein is connected to the cavernous sinus mostly by means of ?**

a-The retromandibular vein

b-The supratrochlear vein

c-The inferior labial vein

d-The posterior auricular vein

e-The superior ophthalmic vein

**48-The process of adjusting vision from a near to a distant object is called ?**

a-Adaptation

b-Accommodation

c-Amblyopia

d-Cataracts

e-Glaucoma

**49-Which of the following is FALSE regarding the Characteristics of the cranial nerves supplying the extraocular muscles?**

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c-Trochlear nerve originates from the dorsal aspect of the brainstem

d-Oculomotor nerve supplies the medial rectus muscle

e-Oculomotor nerve supplies the superior oblique muscle

**50- Which is WRONG regarding the tympanic membrane?**

a-Has the anterior and posterior malleolar folds

b-Is extremely sensitive to pain

c-Is circular and measures about 1 cm in diameter

d- "Cone of light," radiates posteriorly and inferiorly from the umbo

e-Is obliquely placed facing downward, forward, and laterally

**51-External Ear: Select the FALSE statement?**

a- The lymph drainage is to the superficial parotid and mastoid lymph nodes

b- It has an auricle consists of a thin plate of elastic cartilage

c- The auricle possesses both extrinsic and intrinsic muscles

d- The external auditory meatus is lined by mucus membrane

e- The outer third of external auditory meatus is provided with hairs

## Physiology

**1-The parasympathetic ganglia include all the followings EXCEPT?**

a- Ciliary ganglion

b- Celiac ganglion

- c- Otic ganglion
- d- Sphenopalatine ganglion
- e- Submandibular ganglion

**2-Sounds are detected by ----- receptors?**

- a- Chemo
- b- Thermo
- c- Mechano
- d- Photo
- e- Nociceptor

**3- In Horner's syndrome, all correct EXCEPT?**

- a- Miosis
- b- Ptosis
- c- Enophthalmos
- d- Cold skin
- e- Anhidrosis

**4-The first structure to vibrate in response to sounds is?**

- a- Auricle
- b- Malleus
- C- Organ of Corti
- d- Tympanic membrane
- e- Round window

**5-The celiac ganglion is considered as -----?**

- a- Terminal ganglion
- b- Lateral ganglion
- c- Collateral ganglion
- d- Paravertebral ganglion
- e- Parasympathetic ganglion

**6-The depolarization of olfactory receptor cell is further amplified by - -----  
--?**

- a- Outflux Of Cl<sup>-</sup> ions
- b- Outflux Of K<sup>+</sup> ions
- c- Outflux Of Ca<sup>++</sup> ions
- d- Influx of Cl<sup>-</sup> ions
- e- Influx of K<sup>+</sup> ions

**7-The following process is brought about by activation of the parasympathetic nerve fibers?**

- a- Micturition
- b- Sweating
- c- Ejaculation of semen
- d- Exophthalmos
- e- Increased blood pressure

**8-The purpose of the middle ear ossicles is to vibrations?**

- a- Lessen the intensity of
- b- Increase the amplitude of
- c- Change the wavelength of the incoming
- d- Move with
- e- Inhibit

**9-Among the followings, which can least likely undergo adaptation?**

- a- Thermoreceptors
- b- Mechanoreceptors
- c- Photoreceptors
- d- Pain receptors
- e- Taste receptor

**10-Eustachian tube connect with?**

- a-Pharynx with middle ear

- b- Middle ear with external ear
- c- Middle ear with inner ear
- d- External ear with internal ear
- e- Cochlea with vestibular apparatus

**11-Visual pathway involves the followings EXCEPT?**

- a- The optic radiation
- b- The medial geniculate body
- c- The pretectal nucleus
- d- The optic tract
- e- The visual association cortex

**12-The following organs have sympathetic supply, EXCEPT?**

- a- Sweat glands.
- b- Blood vessels of skeletal muscles.
- C- Constrictor pupillae muscles.
- d- Ventricular muscle.
- e- Erector pillea muscle

**13-Organ of Corti helps in----- --?**

- a- Balancing
- b- Maintaining equilibrium
- C- Hearing
- d- Formation of wax
- e- Defensive function

**14-Aqueous and vitreous humors are divided by -----?**

- a- Lens
- b- Iris
- C- Retina
- d- Optic nerve

e- Cornea

**15-Stimulation of the crista ampullaris results in?**

a- Deafness

b- Loud sounds

C- Feeling of rotatory motion

d- A sense of body position

e- Linear movement

**16-The preganglionic fibers-----?**

a- Must relay in the lateral ganglia.

b- Of sympathetic system is usually longer than the postganglionic fibers.

C- Are of type B-fibers.

d- Are non-myelinated fibers

e- Originates from AHC

**17-Stimulation of the greater splanchnic nerve results in ?**

a-Bronchodilation

b-Relaxation of ciliary muscle during far vision

c-Urine retention

d-Catecholamine secretion

e-Increased heart rate

**18- Auditory pathway includes all the followings EXCEPT?**

a- Superior olive

b- Cochlear nucleus

c- Primary auditory cortex

d- Medial geniculate body

e- Superior colliculus

**19- The purpose of the auricle is to ----- sound waves?**

a- Dampen

- b- Increase the intensity of
- c- Act as a collector of
- d- Vibrate in response to
- e- Impedance matching function

## Microbiology

**1-Each of the following statements concerning rabies and rabies virus is correct EXCEPT?**

- a-The virus has a lipoprotein envelope and single-stranded RNA as its genome.
- b-The virus has a single serotype.
- c-Its transmission could be through non-bite exposure.
- d-The virion contains an RNA polymerase.
- e-Infected neurons contain intra-nuclear inclusion bodies called Negri bodies

**2-Regarding prions, which one of the following is the MOST ACCURATE?**

- a-The genome of prions consists of a negative-polarity RNA that has a defective polymerase gene.
- b-Abnormal prion protein is associated with the cell membrane.
- c-Prion proteins are encoded by cellular genes.
- d-The main host defense against prions consists of an inflammatory response.
- e-Variant Creutzfeldt-Jakob disease is a disease of cattle caused by the ingestion of sheep brain mixed into cattle feed.

**3-All are types of exotoxin associated with botulism EXCEPT?**

- a-Type A
- b-Type B
- c-Type E
- d-Type G
- e-Tetanolysin

**4- Each of the following statements concerning the rabies vaccine for use in humans is correct EXCEPT?**

- a- The vaccine contains inactivated rabies virus.

- b- If your patient is bitten by a wild animal, the rabies vaccine should be given.
- c- When the vaccine is used for post-exposure prophylaxis, rabies immune globulin should also be given.
- d- The virus in the vaccine is grown in nerve tissue cell cultures, thus decreasing the risk of allergic encephalomyelitis.
- e- Pre-exposure vaccination given in three doses plus a booster dose every two years

**5- All the following are characteristics of tetanospasmin EXCEPT?**

- a- It is a heat-labile protein.
- b- It is a neurotoxin.
- c- It can be toxoided.
- d- It enhances the release of glycine and gamma-amino butyric acid.
- e- It rapidly fixed to gangliosides

**6- The following are true about leprosy EXCEPT?**

- a- It is caused by acid fast bacteria.
- b- It causes facial nerve palsy.
- c- Tuberculoid leprosy occurs in patients with poor cellular immunity.
- d- More bacilli are found in the skin of patients with lepromatous leprosy than tuberculoid leprosy.
- e- granuloma is a feature of tuberculoid leprosy.

**7- Regarding poliovirus and poliovirus vaccines, which one of the following is MOST ACCURATE?**

- a- Poliovirus is sensitive to acidic pH.
- b- Poliovirus remains latent within sensory ganglia, and reactivation occurs primarily in immunocompromised patients.
- c- Reversion of serotype 3 to virulence could occur with the oral Sabin vaccine that can cause paralytic polio.
- d- Serotype 3 of poliovirus is the most virulent type.
- e- Being given orally considered an advantage for the killed Salk vaccine.

**8- Regarding prions and prion-caused diseases, which one of the following is MOST ACCURATE?**

- a- Prions are very sensitive to ultraviolet light, which is why UV light is used in hospital operating rooms to prevent their transmission.
- b- Prions are protein-containing particles surrounded by a lipoprotein envelope with a DNA polymerase in the envelope.
- c- The diagnosis of Creutzfeldt-Jakob disease is typically made by observing cytopathic effect in cell culture.
- d- Iatrogenic Creutzfeldt-Jakob disease occurs due to eating contaminated cattle products by prion protein.
- e- Prion proteins are characterized by having changes in conformation from the alpha-helical form to the beta-pleated sheet form

**9-Clostridium botulinum associated foodborne illness can occur within 18-24 hours of ingestion of a toxin produced by the bacteria in food. Which of the following is NOT the symptom associated with C. botulinum toxin?**

- a- Poor vision
- b- Fever
- c- Difficulty swallowing
- d- Bulbar paralysis
- e- Urinary retention

**10-All the following are the preventive measures for Tetanus EXCEPT?**

- a-Active immunization of toxoids.
- b-Prophylactic use of antitoxin.
- c-Administration of Bacitracin.
- d-Vaccine Boosters every 10 years.
- e-Caring of unhealed umbilical stump.

**10-A 2 days old premature baby boy born to 22-year-old woman developed pneumonia, the mother was healthy but after the premature delivery she showed the symptoms of urinary tract infection. The blood specimen was taken from the baby, beta hemolytic growth of bacteria was observed in the culture plate. Which could be the possible pathogen that might have transferred from the mother to the baby and caused infection?**

- a- Streptococcus pyogenes.
- b- Streptococcus agalactiae.

- c- Enterococcus faecalis.
- d- Streptococcus bovis.
- e- Streptococcus pneumoniae

## Histology

### 1-Which one of the following statements is CORRECT?

- a-Macula utriculi is the auditory organ of the inner ear
- b-The tectorial membrane is made of protein and calcium carbonate
- c-The inner and outer hair cells enclose the tunnel of Corti
- d-The bony labyrinth includes the membranous labyrinth and the perilymph
- e-Each inner ear has 3 crista ampullaris to sense linear acceleration movement of head

### 2-All the followings are neuroepithelial sensory receptors EXCEPT?

- a-Taste buds
- b-Organ of Corti
- c-Macula utriculi
- d-Christa ampullaris
- e-Muscle spindle

### 3-The innermost layer of human eye is ?

- a-Sclera
- b-Cornea
- c-Choroid
- d-Retina
- e-Iris

### 4-Which of the following statements is a characteristic of the cornea?

- a-It represents the anterior portion of tunica vascularis
- b-Its connective tissue stromal layer is the target for LASIK surgeries
- c-It is composed of three layers
- d-It is devoid of nerve endings

e-forms the anterior boundary of the posterior chamber of the eye

**5-Select the FALSE regarding the bony labyrinth?**

a-They are lined by endosteum

b-It consists of the utricle and saccule

c-Contain a clear fluid the perilymph

d-Is situated in the petrous part of the temporal bone

e-In its lateral wall are the fenestra vestibule and the fenestra cochleae

**7- The stapes sends its vibration to the -----?**

a- Incus

b- Tympanic membrane

c- Oval window

d- Round window

e- Malleus

**8- The olfactory receptor cells are examples of -----neurons?**

a- Sensory

b- Multipolar

c- Association

d- Bipolar

e- Inhibitory

**9- Stretch of an innervated skeletal muscle evokes -----?**

a- Contraction of its spindles

b- Contraction of its extrafusal fibers

c- Contraction of antagonistic muscles

d- Relaxation of synergistic muscles

e- Relaxation of the same muscle

**11- The followings belong together EXCEPT which one?**

a- Incus

- b- Tympanic cavity
- c- Middle ear
- d- Cochlear duct
- e- Eustachian tube

**12- Which of the following is CORRECTELY matched?**

- a- Stria vascularis /// simple columnar epithelium
- b- Tympanic membrane /// simple squamous epithelium
- c- Eustachian tube (cartilaginous part) /// simple columnar ciliated epithelium
- d- Vestibular membrane /// organ of Corti
- e- Ciliary processes /// stratified cuboidal epithelium

**13- ----- specialized receptors that are sensitive to stretch and are located within the skeletal muscle?**

- a- Meissner's corpuscles
- b- Tendon spindle
- c- Muscle spindle
- d- Free nerve endings
- e- Pacinian corpuscles

**14- Which one of the following statements is CORRECT?**

- a- Otoliths are normally located in the ampulla of semicircular canals
- b- Meibomian gland is known to secrete tears
- c- Muller's cells share in the formation of the limiting membranes
- d- Bruch's membrane lies between the pigmented and the non-pigmented epithelial layers
- e- The lens epithelium completely surround the lens

**15- Which of the following is INCORRECTLY matched?**

- a- Eye color /// melanocytes in iris stoma
- b- Vestibular membrane /// hair cells of macula utriculi
- c- Basilar membrane /// segregate cochlear duct from scala tympani
- d- Semicircular ducts /// packed with endolymph

e- Secondary tympanic membrane /// round window of middle ear

**16-Which one of the following statements is CORRECT?**

a-At the limbus Bowman's membrane becomes continuous with the trabecular meshwork

b-The lens fibers composed of special protein called Fibrillin

c-The pigmented epithelium is important for the immune privilege of the retina

d-The lens capsule is located at the anterior portion of the lens between the lens epithelium and lens fibers

e-Color blindness primarily results from a defect in the ganglion cells layer

**17-The maculae can be found in the ?**

a- Cochlear duct

b- Sacculle

c- Semicircular canal

d- Semicircular ducts

e- Middle ear

**18- Muscle spindles ?**

a- Are found in all skeletal muscles

b- Are found only in large skeletal muscles

c- Consist of small numbers of extrafusal muscle fibers

d- Consist of a large number of extrafusal muscle fibers

e- Are located in tendons

**19- All the followings regarding macula sacculle are wrong EXCEPT?**

a- Contains two types of cells inner and outer hair cells

b- The hair cells have several kinocilia of graded height

c- Covered with gelatinous membrane devoid of otoconia

d- Specialized sensory organs found in the membranous labyrinth of the vestibule

e- It is the auditory organ of the inner ear

## Pathology

**1- A 69 year old female referred to the specialty memory clinic from neurology with a 2-year history memory loss, and executive function loss. Word finding and reading/writing skills were noted to have deteriorated in the preceding 6 months according to her husband. She also stopped driving her car about 6 months. Magnetic resonance imaging scan revealed mild generalized cortical atrophy. Which of the following mechanisms is most likely responsible for her disease?**

- a- Aggregation of Huntington
- b- Aggregation of Amyloid beta (AB) peptide
- c- Autoimmune response against components of the myelin sheath
- d- Loss of upper motor neurons in the cerebral cortex
- e- Dopaminergic neurons degeneration

**2-A 26 years old female was admitted to hospital having sustained a deep laceration to the forearm following a road traffic accident. On examination there is loss of sensation over the lateral palm, including the thumb and first two fingers of her hand. Which of the following pathologic changes will most likely result distally in the forearm structure that was injured to produce this finding on examination?**

- a- Fibrinoid necrosis.
- b- Coagulative necrosis.
- c- Wallerian degeneration.
- d- Segmental demyelination.
- e- Chronic inflammation.

**3-One of the following is CORRECT about Thiamine (Vitamin B1) deficiency?**

- a- Thiamine deficiency result from gastric disorders such as carcinomas or chronic gastritis
- b- Untreated Korsakoff syndrome leads to the irreversible Wernicke encephalopathy.
- c- Wernicke encephalopathy is associated with memory impairment.
- d- Korsakoff syndrome is the acute phase of the encephalopathy
- e- Korsakoff syndrome is reversible when treated with thiamine

**4-Anticipation typically occurs with disorders that are caused by a trinucleotide repeat expansion. The number of repeats can change as the gene is passed from parent, which leads to more severe and early- onset signs and symptoms. Which of the following diseases is associated with this Phenomenon?**

- a- Alzheimer Disease
- b- Parkinson Disease
- c- Wernicke encephalopathy
- d- Huntington Disease
- e- Amyotrophic Lateral Sclerosis

**5-Within 12 hours of an irreversible hypoxic-ischemic insult, this cell body shrinks, the nucleus is pyknotic, the nucleolus disappears, the cytoplasm shows intense eosinophilia and Nissl substance is lost. What is this cell type most likely to be?**

- a- Astrocyte
- b- Endothelial cell
- C- Neuron
- d- Microglia
- e- Oligodendroglia

**6-One of the following pair between the diseases or injuries and their neuropathies anatomic patterns is INCORRECTLY matched?**

- a- Blunt trauma affecting radial nerve injury/// Simple mononeuropathy
- b- Carpal tunnel syndrome /// Simple mononeuropathy
- c- Vasculitis // Mononeuritis multiplex
- d- Diabetic Peripheral Neuropathy /// Polyneuropathies
- e- Guillain-Barre Syndrome /// Mononeuritis multiplex

**7-One of the following pairs between the neurodegenerative disease and the main location for the CNS injury is WRONGLY matched?**

- a- Wernicke encephalopathy: mammillary bodies

- b- Huntington Disease: Caudate and putamen.
- c- Amyotrophic Lateral Sclerosis: Anterior horn cells
- d- Parkinson Disease: Striatum.
- e- Alzheimer Disease: Frontal and temporal lobes

**8-An 11-year-old boy is referred to the pediatric surgery department with left psoas muscle mass. The histopathologic result confirmed the diagnosis of a Neurofibroma (Psoas biopsy). The disease started in Childhood with the appearance of multiple hyper pigmented skin macules. Lisch nodules were noticed on the iris of both eyes. This disease represents a major risk factor for development of which of the following tumors?**

- a- Meningiomas
- b- Malignant peripheral nerve sheath tumors
- C- Acoustic neuroma
- d- Ependymomas
- e- Schwannomas

**9-One of the following diseases is associated with early onset in trisomy 21 individuals (Down syndrome)?**

- a- Amyotrophic Lateral Sclerosis
- b- Parkinson Disease
- C- Wernicke encephalopathy
- d- Huntington Disease
- e- Alzheimer Disease

**10-Activated after injury for scar and repair, this cell undergoes both hypertrophy and hyperplasia, where the nucleus enlarges and the nucleolus becomes prominent. The cytoplasm expands with bright pink hue extending multiple processes. What is this cell type most likely to be?**

- a- Astrocyte
- b- Endothelial

- c - Neuron
- d. Microglia
- e- Oligodendroglia

**11-A 29 year-old female was biking with her husband. She was experiencing difficulty reading signs and difficulty using her arms while steering her bike, then suddenly she felt severely fatigued. Visual disturbances and weaknesses persisted for-a few days, eventually affecting her productivity at work, prompting a visit to her family physician. MRI findings revealed plaques in the corpus callosum and periventricular white matter. Which of the following mechanisms is most likely responsible for her disease?**

- a- Aggregation of Amyloid beta (AB) peptide
- b- Aggregation of Huntingtin
- C- Autoimmune response against components of the myelin sheath
- d- Loss of upper motor neurons in the cerebral cortex
- e- Dopaminergic neurons degeneration

## Pharmacology

**1-All following are true about spinal anesthesia EXCEPT?**

- a- Drug is injected into cerebrospinal fluid
- b- A spinal block is a single injection
- c- Also called intrathecal anesthesia
- d- Needle is inserted between L1 and L2 space
- e- Commonly used in caesarean section

**2- All following about adrenergic drugs are true EXCEPT?**

- a- Salbutamol and dobutamine are selective beta two acting drugs
- b- Phenylephrine and ephedrine are non-catecholamines
- c- Pseudoephedrine is used as nasal mucosal decongestant
- d- Dopamine at very high doses causes vasoconstriction
- e- Amphetamines produce sedation in children

**3- All the followings about local anesthesia (LA) are true EXCEPT?**

- a- Lidocaine is well absorbed from mucous membranes on topical application
- b- Bupivacaine is long-acting LA and half-life is (3 hrs.)
- c- Lidocaine is short-acting LA and half-life is (1.5 hrs.)
- d- Side effects: anxiety, tremors, convulsions and hypertension
- e- Bupivacaine is used for epidural and spinal anesthesia

**4- The followings are irreversible ChE. inhibitors EXCEPT?**

- a- Paraoxon
- b- Sarin
- c- Carbaryl
- d- Disofluorophate DFP
- e- Malaoxon

**5- All the of the followings are therapeutic uses of ALPHA- BLOCKERS EXCEPT?**

- a- Prophylaxis of migraine.
- b- Essential hypertension.
- c- Benign prostatic hyperplasia.
- d- Pheochromocytoma.
- e- Raynaud disease.

**6- Regarding local anesthesia, which is WRONG?**

- a- Epidural anesthesia is used in thoracic, lumbar, sacral regions
- b- Epidural anesthesia is used in pain management during normal delivery
- c- Spinal anesthesia, drug is injected between L3 and L4 space or L4 and L5 space
- d- Spinal anesthesia, spinal block is a single injection
- e- Epidural anesthesia is used in caesarean section (CS)

**7- All the following manifestation of atropine poisoning are true EXCEPT?**

- a- Convulsions
- b- Hypothermia
- c- Hallucination

d- Delirium

e- Tachycardia

**8- Adrenaline, which of following is FALSE?**

a- Causes vasodilatation of blood vessels in skin

b- Has inotropic and chronotropic effects

c- Can be given topically in chronic open angle glaucoma

d- Is used in cardiac arrest and anaphylactic shock

e- Side effects include headache, tremor, anxiety

**9-Phenylephrine, all following are true EXCEPT?**

a- Indirect acting, synthetic adrenergic drug

b- Has alpha 1-agonist effect

c- Is used as mydriatic agent

d- Can be used as vasoconstrictor agent with local anesthetics

e- Increases both systolic and diastolic blood pressure.

**10-All the following are therapeutic uses of PROPRANOLOL EXCEPT?**

a- Angina pectoris.

b- Cardiac dysrhythmia.

c- Bradycardia

d- Hypertension.

e- Myocardial infarction

**11-Stimulation of beta two adrenoreceptors causes all following EXCEPT?**

a- Bronchodilatation

b- Vasodilatation

c- Hypokalemia

d- Relaxation of uterus

e- Hypoglycemia

**12-Pralidoxime: which of the following is FALSE?**

a- reactivates irreversibly inhibited ChE by dephosphorylation

- b- It is effective in restoring activity of ChE at NMJ where atropine does not help
- c- is quaternary and synthetic
- d- It helps with atropine in restoring activity of Ach. at muscarinic sites
- e- it retains its effectiveness up to 20 h after exposure to irreversible ChE inhibitor gas

**13-All the following are therapeutic uses of Cholinergic antagonists drugs EXCEPT?**

- a- Parkinson's disease.
- b- Motion sickness.
- c- Bradycardia following MI.
- d- In bronchial asthma.
- e- Benign prostatic hypertrophy

**14-All the following about atropine is correct EXCEPT?**

- a- It is alkaloids obtained from atropine belladone
- b- Considered as prototype for parasympatholytic
- c- Causes mydriasis
- d- Increase lacrimation secretion
- e- Produce central stimulant effect

## Biochemistry

**1- One of the following is NOT TRUE regarding the phototransduction process?**

- a- The visual pigment is photobleached only in present of bright light
- b- The active rhodopsin contains all the trans retinal form of vitamin A
- c- The light should pass through the thickness of the retina to reach the photoreceptor cells
- d- Rhodopsin is GPCR with its ligand pre-bound
- e- In complete darkness, photoreceptor cells are depolarized and release inhibitory neurotransmitters

**2- One of the followings is NOT TRUE regarding taste bud components?**

- a- Taste receptor cells are modified neuroepithelial cells which are innervated by nerve fibers at the basal end

- b- Taste pore is close to the apical end of the taste receptor cells
- c- Basal cells are epithelial cells which migrate from adjacent tissue and replace old supporting cells every 10 days
- d- Microvilli contains ion channels or GPCR receptors
- e- Tastants are chemical compounds which can stimulate taste receptor cells through binding to specific receptors on the surface of microvilli

**3- Which of the following could be detected on the back of dorsum of the tongue? bio**

- a- Sweet
- b- Sour
- c- Bitter
- d- Salty
- e- Umami

**4-Sweet taste is mediated by ?**

- a-cGMP response only
- b-cAMP response only
- c-IP3 response only
- d-Both cAMP and IP3 responses
- e-Both cAMP and cGMP responses

**5-Color blindness is due to defect in?**

- a-Rods
- b-Cones
- c-Rods and Cones
- d-Rhodopsin
- e-Aqueous humor

**6-The rate limiting step involved in the visual pigment regeneration process is?**

- a-The reduction of all trans retinal to all trans retinol
- b-The oxidation of 11-cis retinol to 11-cis retinal
- c-The esterification of all trans retinol to all trans retinyl ester

d-The isomerization of all trans retinyl ester to 11-cis retinol

e-The cleavage of the schiff base bond

**7-In Rods, the cytoplasmic level of cGMP is high in absence of stimulus ?**

a-Due to dark current

b-Because the rate of synthesis of CGMP by phosphodiesterase enzyme is high

c-Due to the influx of Na<sup>+</sup> ions

d-Because phosphodiesterase enzyme is switched off

e-Because guanylyl cyclase is inactive

## Embryology

**1- The nasolacrimal groove lies between -----?**

a- Medial nasal process and maxillary process

b- Lateral nasal process and maxillary bone

c- Lateral nasal process and mandibular process

d- Lateral nasal process and maxillary process

e- Median nasal process and maxillary process

**2- Which of the followings arise from the first pharyngeal arch?**

a- Stapedius muscles

b- Styloid process

c- Cricoid cartilage

d- Malleolus

e- Cricothyroid muscle

**3- Unilateral cleft palate is due to -----?**

a- Failure of fusion of the two palatine processes of the maxilla with each other in the midline and with the primary palate on both side

b- Failure of fusion of the two palatine processes of the maxilla with each other in the midline and with the primary palate on left side

c- Failure of fusion of the two mandibular processes of the maxilla with each other in the midline and with the primary palate on one side

d- Failure of fusion of the two palatine processes of the maxilla with each other in the midline

e- Failure of fusion of the two palatine processes of the maxilla with each other in the lateral and with the primary palate on one side

**4- The palatine tonsil is developed from -----?**

a- The first pharyngeal arch

b- The 2nd pharyngeal pouch

c- The 2nd pharyngeal arch

d- The 2nd pharyngeal cleft

e- The 3rd pharyngeal pouch

**5-The inner layer of tympanic membrane is developed from?**

a-The first pharyngeal pouch

b-The 2nd pharyngeal pouch

c-The 2nd pharyngeal arch

d-The 2nd pharyngeal cleft

e-The 3rd pharyngeal pouch

**6-All the followings from maiden nasal process EXCEPT?**

a-Anterior part of nasal septum

b-Primary palate

c-Bones carries canine

d-Philtrum

e-Posterior part of nasal septum

**7-Median harelip is due to?**

a-Failure of fusion of lateral with medial nasal processes

b-Failure of fusion of two medial nasal processes

c-Failure of fusion of two lateral nasal processes

d-Failure of fusion of two median nasal processes

e-Failure of fusion of two mandibular processes

**8-Which of the followings arise from the 4th pharyngeal arch?**

- a-Stapedius muscles
- b-Styloid process
- c-Cricoid cartilage
- d-Malleolus
- e-Cricothyroid muscle

## Medicine & Surgery

**1- All the following are variants of Guillain-Barre Syndrome EXCEPT? MED**

- a- Acute inflammatory demyelinating neuropath
- b- Acute motor and sensory axonal neuropathy
- c- Miller Fisher Syndrome
- d- Multifocal motor neuropathy
- e- Panautonomic neuropathy

**2-All the following are variants of Guillain Barre Syndrome EXCEPT? FINAL**

- a-Acute inflammatory demyelinating neuropath
- b-Acute motor and sensory axonal neuropathy
- c-Miller Fisher Syndrome
- d-Panautonomic neuropathy
- e-Multifocal motor neuropathy

**3- Medial squint is the result of injury of which nerve -----?**

- a- Oculomotor
- b- Trochlear
- c- Nasociliary
- d- Abducent
- e- Ophthalmic

**4-Which of the following IS NOT Characteristic for paralytic squint?**

- a-Paralysis of one or more of the extraocular muscles
- b-Can be caused by elevated ICP (intracranial pressure)

- c-Stable angle of eye deviation in all positions of gaze
- d-Paralysis of abducent nerve will result in failure of eye abduction
- e-Paralysis of trochlear will result in vertical diplopia

**5-Which of the injury of the following nerve leading to diplopia?**

- a- Oculomotor
- b- Trochlear
- c- Nasociliary
- d- Abducent
- e- Ophthalmic

**6-All the following are manifestation of autonomic neuropathy EXCEPT?**

- a-Orthostatic hypotension
- b-Arrhythmias
- c-Impotence
- d-Urine incontinence
- e-Clonus

انتهى

فَفُزْ بِعِلْمٍ وَلَا تَطْلُبْ بِهِ بَدَلًا  
فَالنَّاسُ مَوْتَى وَأَهْلُ الْعِلْمِ أَحْيَاءُ



-صفاء مطر

-آلاء خضر

-أفنان جابر