

الطب والجراحة  
لجنة

الفريق الأكاديمي

# Biochemistry

## End of course exam in Biochemistry

1. One of the following is NOT part of vitamin A metabolism:
  - A. Beta-carotene is cleaved into retinal
  - B. Retinol is esterified into palmitic acid
  - C. Retinol reach liver in chylomicrons **XXX**
  - D. Retinol is carried to extra-hepatic tissues via transthyretin
  - E. Inside extrahepatic tissues, retinol is bound to cellular retinol binding protein
  
2. One of the following changes in position 180 of the photoreceptor protein in cone cells can affect green color vision making it similar to red vision:
  - A. Alanine to serine **XXX**
  - B. Serine to alanine
  - C. Valine to alanine
  - D. Serine to threonine
  - E. Alanine to phenylalanine

## Final exam in Biochemistry

1. One of the following events does NOT lead to activation of vision-based signaling:
  - A. Exchange GDP for GTP on transducin
  - B. Conversion of 11-cis-retinal to all-trans-retinal
  - C. Activation of cGMP phosphodiesterase
  - D. Decreased  $\text{Na}^+$  and  $\text{Ca}^{2+}$  levels in cells
  - E. Activation of guanylate cyclase **XXX**

2. The protein, arrestin, allows re-signaling of vision by:

- A. Phosphorylating rhodopsin
- B. Phosphorylating transducin
- C. Binding to transducin **XXX**
- D. Hydrolyzing cGMP to GMP
- E. Converting all-trans retinal to 11-cis-retinal

### Make up Exam in Biochemistry

1. The opsin gene(s) of this or these absorbance wavelengths are located on the X chromosome:

- A. Red
- B. Green
- C. Blue
- D. Red and green **XXX**
- E. Red and blue

2. One of these statements is TRUE in regards to rod cells' response to light:

- A. They are involved in color vision at bright light
- B. Their visual pigment contains 11-cis-retinal molecule **XXX**
- C. They absorb light at 3 wavelengths: blue, green, and red
- D. Their  $\beta\gamma$  dimer inhibits cGMP phosphodiesterase
- E. Metarhodopsin II triggers release of  $\alpha$  subunit from  $\beta\gamma$  dimers

1- Retinal and retinol are interconverted requiring dehydrogenases in the presence of:

- A- NADH + H<sup>+</sup> or NADPH + H<sup>+</sup>
- B- NADH + H<sup>+</sup>
- C- NADPH + H<sup>+</sup>
- D- NADPH + H<sup>+</sup> and NAD **XXX**
- E- NADPH + H<sup>+</sup> and NADH + H<sup>+</sup>

**2- Transducin (the protein involved in the process of phototransduction) is a:**

- A- Signal transducer
- B- Stimulatory G-protein **XXX**
- C- Inhibited by Guanylate Cyclase Activating Protein
- D- Inhibitory G-protein
- E- Activated by GTPase activating protein

**3- The neurotransmitter released by photoreceptors (most likely glutamate)**

- A) Has inhibitory effects on OFF-center bipolar cells
- B) Has excitatory effects on ON-center ganglion cells
- C) Has excitatory effects on ON-center bipolar cells **XXX**
- D) Has inhibitory effects on ON-center bipolar cells
- E- Has excitatory effects on ON-center ganglion cells

**1- Retinol and retinal are interconverted requiring dehydrogenase or reductase in the presence of**

- (A) NAD or NADP
- (B) NADH + H<sup>+</sup>
- (C) NADPH
- (D) FAD

**2- Retinal is a component of**

- (A) Iodopsin
- (B) Rhodopsin
- (C) Cardiolipin
- (D) Glycoproteins

**3- On exposure to light rhodopsin forms**

- (A) All trans-retinal
- (B) Cis-retinal
- (C) Retinol
- (D) Retinoic acid

**4- Retinol isomerase is present in**

- (A) Retina
- (B) Liver
- (C) Both (A) and (B)
- (D) None of these

**5- Retinal is converted into retinoic acid in the presence of**

- (A) Retinal oxidase
- (B) Retinal carboxylase
- (C) Retinene reductase
- (D) Spontaneously

**6- Rhodopsin contains opsin and**

- (A) 11-cis-retinal
- (B) 11-trans-retinal
- (C) All-cis-retinal
- (D) All trans-retinal

**7- When light falls on rod cells**

- (A) All-cis-retinal is converted into all-trans-retinal
- (B) 11-cis-retinal is converted into 11-trans-retinal
- (C) 11-trans-retinal is converted into all-trans- retinal
- (D) 11-cis-retinal is converted into all-trans-retinal

**8- Conversion of all-trans-retinal into all-trans-retinol requires**

- (A) NAD
- (B) NADH
- (C) NADP
- (D) NADPH

**9- Retinoic acid can**

- (A) Act as a photo receptor
- (B) Support growth and differentiation
- (C) Act as an anti-oxidant
- (D) None of these

**10- Transducin is a**

- (A) Signal transducer
- (B) Stimulatory G-protein
- (C) Trimer
- (D) All of these

**11- The human species can biosynthesize**

- (A) Vitamin C
- (B) Vitamin B12
- (C) Thiamine
- (D) Niacin

**12. Retina contains this photosensitive pigment:**

- (A) Rhodopsin
- (B) Opsin
- (C) Retinol
- (D) Melanin

**13- 330. Which of the following statements regarding Vitamin A is true?**

- (A) It is not an essential Vitamin
- (B) It is related to tocopherol
- (C) It is a component of rhodopsin
- (D) It is also known as Opsin

**14-The light 'receptor' of the rod is called**

- A) Transducin
- B) Rhodopsin
- C) Phosphodiesterase
- D) Absorbin

**15- The neurotransmitter released by photoreceptors (mostl likely glutamate)**

- A) Has inhibitory effects on OFF-center bipolar cells
- B) Has excitatory effects on ON-center ganglion cells
- C) Has excitatory effects on ON-center bipolar cells
- D) Has inhibitory effects on ON-center bipolar cells

# Histo

**70- The following muscles are derived from the second pharyngeal arch, EXCEPT:**

- A. Platysma,
- B. Auricular muscles,
- C. Stapedius,
- D. Anterior belly of digastric, XXX
- E. Posterior belly of digastric.

**71- First arch abnormalities are mostly related to:**

- A. Mesodermal tissue,
- B. Neural crest cells, XXX
- C. Pharyngeal pouches,
- D. Neural tube,
- E. Vascular accident.

**72- Inner hair cells of Organ of Corti:**

- A. Form 3 rows,
- B. They are of type I, XXX
- C. They are supported by outer pharyngeal cells,
- D. Innervated by scanty nerve endings,
- E. They receive no efferent fibers.

**73- Endolymph:**

- A. Fills bony labyrinth,
- B. Present in endolymphatic duct and sac only,
- C. Continuous with CSF,
- D. Fills all the membranous labyrinth, XXX
- E. Present in the middle ear cavity.

**74- Concerning the cornea, the following are true, EXCEPT:**

- A. The anterior epithelium is stratified squamous epithelium,
- B. Bowman's membrane supports the anterior epithelium,
- C. The cornea has rich innervations by sensory free nerve endings,
- D. The cornea is well vascularized, XXX
- E. The cornea is transparent.

**75- Macula lutea of the retina:**

- A. It is a point of low visual acuity,
- B. It has no cones,
- C. Located 3mm lateral to optic disc, XXX
- D. Is called the blind spot,
- E. Has rich blood supply.

**76- Concerning the pigment epithelium of the retina, the following are true, EXCEPT:**

- A. Has phagocytic activity,
- B. It is nutritive to the rods and cones,
- C. Absorbs extra light,
- D. Involved in retinol metabolism,
- E. Forms the innermost layer of retina. XXX

**77- Merkel cell disc ending, is located in:**

- A. Outer layer of epidermis,
- B. Deeper layer of epidermis, XXX
- C. Dermis,
- D. Between muscles,
- E. Musculo-tendinous junction.

**78- Cells of the sensory ganglia, characterize by the following, EXCEPT:**

- A. Large in size,
- B. Spherical,
- C. Arranged in groups,
- D. Multipolar, XXX
- E. Surrounded by well developed cellular capsule.

**79- In myelinated nerve fiber, nodes of Ranvier represent:**

- A. Locations for Schwanns cells nuclei,
- B. Increase in thickness of myelin sheath,

- C. Point of branching of Schwanns cells,
- D. Points of synaptic contacts,
- E. Discontinuations in myelin sheath. XXX

**72- Inner hair cells of Organ of Corti:**

- F. Form 3 rows,
- G. They are of type I, XXX
- H. They are supported by outer phalyngeal cells,
- I. Innervated by scanty nerve endings,
- J. They receive no efferent fibers.

**74- Endolymph:**

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- I. Points of synaptic contacts,
- J. Discontinuations in myelin sheath. **XXX**

**1. Merkel cell discs are innervated by:**

- A. Sympathetic fibers
- B. Alpha motor fibers
- C. Postganglionic parasympathetic fibers
- D. Large myelinated Aff fibers **XXXXXXXX**
- E. Non-myelinated fibers

**2. Damaged taste bud sensory cells could regenerate from:**

- A. Sensory nerve endings

- B. Motor nerve endings
- C. Supporting columnar cells
- D. Basal cells XXXXXXXX
- E. Schwann cells

**3. In chromatolysis, the following are true except:**

- A. It is a retrograde changes
- B. It involves the cell body
- C. There swelling of the soma
- D. Nissl's bodies become large XXXXXXXx
- E. The nucleus is shifted into periphery

**4. Bruch's membrane ( basal lamina) in the eye is between:**

- A. Anterior corneal epithelium and substantia propria
- B. Substantia propria and posterior corneal epithelium
- C. Choroid and pigmented epithelium of retina XXXXXXX
- D. Sclera and choroids
- E. Vitreous body and the lens

**5. Inner nuclear layer of the retina contains nuclei of following except:**

- A. Photoreceptors XXXXX
- B. Bipolar cells
- C. Muller cells
- D. Amacrine cells
- E. Horizontal cells

**6. Basilar membrane of cochlear duct extends:**

- A. Inside scala vestibule
- B. From inferior to superior wall
- C. From spiral ligament to osseous spiral lamina XXXXX
- D. From saccule to utricle
- E. As a part of copula

**1- Merkel cells:**

- A. Present on the wall of capillaries
- B. Pain receptors
- C. Specialized sensory cells in epidermis XXXX
- D. Present inside the meisner corpuscles
- E. They are anucleate cells

**2- Intrafusal muscle fibers in muscle spindle are innervated by:**

- A. Sensory fibers only

- B. Alpha motor fibers only
- C. Sensory and alpha motor fibers
- D. Sensory and gamma motor fibers XXXX
- E. Free nerve endings

3- **Pigment epithelium of retina has the following features except one:**

- A. Made of cuboidal cells
- B. Contains melanin pigments
- C. In contact with inner segments of photoreceptors XXXX
- D. Absorbs the excess of light
- E. Rests on Bruch's membrane

4- **The cells of the dorsal root ganglia are characterized by the following except one:**

- A. Large
- B. Spherical
- C. Mostly pale in staining
- D. The nucleus is in the center
- E. They are multipolar XXXX

5- **Aqueous humor is secreted by:**

- A. Pigment epithelium of retina
- B. Choroid of posterior one fifth of the eye
- C. Epithelium lining the ciliary processes XXXX
- D. Posterior epithelium of the iris
- E. Irido-corneal trabeculae

6- **Lens fibers are characterized by following except:**

- A. Contain collagen IV XXXXX
- B. Contain crystalline
- C. Grow from posterior layer
- D. Anucleated
- E. Could become opaque by age

# Embryo

- 7- **External acoustic meatus develops from:**
- A. First branchial groove XXXX
  - B. First pharyngeal pouch
  - C. Nasal sac
  - D. Otocyst
  - E. Third pharyngeal groove
- 8- **The myelin sheath of the peripheral nerves is formed by:**
- A. Ependymal cells
  - B. Fibroblasts
  - C. Mast cells Macrophages
  - D. Schwann cells XXXX
  - E. Pericytes
- 9- **The ventral wing of the third pharyngeal pouch gives rise to:**
- A. Thymus XXXX
  - B. Superior parathyroid gland
  - C. Thyroid
  - D. Ultimobranchial body
  - E. Palatine tonsil
- 10- **Defect in neural crest cells proliferation and migration could result in defect, mostly, in:**
- A. Neurocranium
  - B. Sphenoid bone
  - C. Occipital bone
  - D. Mandible XXXX
  - E. External ear
- 11- **External acoustic meatus develops from:**
- A. Buccopharyngeal membrane
  - B. Foramen caecum
  - C. First pharyngeal groove (cleft) XXXXX
  - D. First pharyngeal pouch
  - E. Second pharyngeal groove
- 12- **Recent view of development of Thymus that its reticulo-epithelial cells are from:**
- A. 3<sup>rd</sup> pouch only
  - B. Fifth pouch
  - C. Second pouch

- D. 2<sup>nd</sup> pharyngeal groove
- E. 3<sup>rd</sup> pouch endoderm and ectodermal cells    XXXXX

**13- Sphenomandibular ligament is from:**

- A. Meckel cartilage sheath    XXXXXX
- B. Reichert's cartilage
- C. Maxillary process
- D. Palatine shelves
- E. Ventral cartilage of first arch

**14- Relayed on neurons of Ciliary ganglion:**

- A. Preganglionic sympathetic fibers from carotid plexus
- B. Post ganglionic sympathetic fibers
- C. Preganglionic sympathetic fibers from oculomotor nerve    XXXXXX
- D. Special sensory fibers
- E. Fibers from lesser petrosal nerve

**15- The following are derived from second pharyngeal arch, except:**

- A. Upper part of the body of hyoid bone
- B. Cricoid cartilage    XXXXX
- C. Styloid process
- D. Stapes
- E. Stapedius

**16- The following muscles are derived from the second pharyngeal arch, EXCEPT:**

- A. Platysma,
- B. Auricular muscles,
- C. Stapedius,
- D. Anterior belly of digastric,    XXX
- E. Posterior belly of digastric.

**17- First arch abnormalities are mostly related to:**

- A. Mesodermal tissue,
- B. Neural crest cells,    XXX
- C. Pharyngeal pouches,
- D. Neural tube,
- E. Vascular accident.

**18- The Retina is considered as a part of the brain, embryologically it arises from:**

- A. Rhomboencephalon
- B. Mesencephalon
- C. Diencephalon
- D. Telencephalon
- E. Lens placode

19- **The primary palate is formed by:**

- A. Maxillary prominences
- B. Intermaxillary segment
- C. Mandibular prominence
- D. Fronto-nasal process
- E. Lateral nasal swellings

20- **A cyst present on the anterior border of Sternocleidomastoid muscle, could be a remnant of:**

- A. Lateral cervical sinus
- B. Ultimobranchial body
- C. Thyroglossal duct
- D. First branchial cleft
- E. Ectopic thyroid.

# Pharma

1. Which of the following about drugs & adverse effects is FALSE?
  - A. Amphetamines produce psychosis on chronic use
  - B. Salbutamol produces hypokalemia when given parenterally
  - C. Dobutamine produces heart failure when given early after myocardial infarction **XXX**
  - D. Oxymetazoline produces nasal mucosal atrophy with prolonged use
  - E. Prazocin produces mild tachycardia
  
2. Which of the following statements about drugs is FALSE?
  - A. Pseudoephedrine is useful as nasal mucosal decongestant
  - B. Adrenaline should be avoided in hyperthyroidism
  - C. Phenylephrine is useful as pressor agent during spinal anaesthesia
  - D. Doxazocin should be avoided in benign prostatic hypertrophy **XXX**
  - E. Phentolamine is useful in clonidine withdrawal hypertensive crisis
  
3. Which of the following statements about beta-agonists is FALSE?
  - A. Salmeterol is useful in prevention of nocturnal asthmatic attacks
  - B. Terbutaline is useful in treatment of acute asthmatic attacks
  - C. Salbutamol is useful in prevention of premature labour
  - D. Ritodrine is a uterine relaxant agent
  - E. Isoprenaline is a useful vasodilator in heart failure **XXX**
  
4. Which of the following statements about beta-blockers is FALSE?
  - A. Esmolol is useful in supraventricular tachycardia
  - B. Pindolol should be avoided in angina pectoris patients with bradycardia **XXX**
  - C. Atenolol is useful after acute myocardial infarction
  - D. Metoprolol is useful in moderate heart failure with high sympathetic tone
  - E. Timolol reduces aqueous humour production
  
5. Which of the following statements about adrenaline is FALSE?
  - A. Enhances platelet aggregation
  - B. Reduces high IOP in acute close angle glaucoma **XXX**
  - C. Antagonizes physiological actions of histamine in anaphylactic shock
  - D. Reduces release of vasoactive substances from mast cells
  - E. Is contraindicated in patients taking tricyclic anti-depressants
  
6. Which of the following statements about drugs is FALSE?

- A. Methyldopa inhibits sympathetic outflow from medulla
- B. Noradrenaline is a useful vasoconstrictor during local anaesthesia
- C. Ephedrine enhances neuromuscular transmission in myasthenia gravis
- D. Metyrosine inhibits synthesis of endogenous catecholamines
- E. Parenteral labetalol precipitates hypertensive crisis in susceptible patients **XXX**

**7. Which of the following statements about local anaesthesia is FALSE?**

- A. Tetracaine is an ester useful in spinal anaesthesia
- B. Bupivacaine is an amide useful in obstetric procedures
- C. Local infiltration of xylocaine in fingers & toes is safe
- D. Dissociation of LA is enhanced in inflamed tissues **XXX**
- E. Cocaine has vasoconstrictor effect

**Saed End Course Exam**

**1. All the following of cholinergic antagonists in the GIT are correct, EXCEPT:**

- A. Decrease salivation
- B. Decrease acid secretion
- C. Decrease motility
- D. Decrease intestinal transit time **XXX**
- E. Have anti-diarrhoeal and anti-spasmodic effects

**2. All the following statements about atropine are correct, EXCEPT:**

- A. Is considered as prototype for parasympatolytics
- B. Is a natural tertiary amine
- C. Has well absorption and wide distribution
- D. Is completely metabolized by the liver **XXX**
- E. Blocks all 3 subtypes of muscarinic receptors

**3. All the following adverse effects of direct cholinomimetic agents are correct, EXCEPT:**

- A. Excessive sweating and salivation
- B. Hypotension
- C. Constipation **XXX**
- D. Bronchospasm
- E. Impaired eye accommodation to far vision

**4. All the following about direct-acting cholinoreceptor agonists are correct, EXCEPT:**

- A. Bethanechol is used to treat post-labour urinary retention
- B. Bethanechol has longer duration of action than Ach
- C. Bethanechol has useful potent nicotinic stimulant effects **XXX**
- D. Carbachol is used topically in treatment of glaucoma
- E. Pilocarpine is a natural alkaloid resistant to cholinesterase enzymes

**5. All the following statements about neostigmine are correct, EXCEPT:**

- A. It is a reversible inhibitor of cholinesterase enzyme
- B. It can be given orally and subcutaneously

- C. It causes marked central effects like confusion **XXX**
- D. It is useful as an antidote to competitive NM-blocker agents (tubocurarine-like drugs)
- E. Its is used in myasthenia gravis to improve muscle weakness

**46. The following statements are correct EXCEPT:**

- B. Atropine effect on the eye lasts for 7 days or more after its local application,
- C. Continuous tissue exposure to adrenergic agonists leads to up regulation of receptors, **XXX**
- D. Constrictor pupillae muscle is innervated with parasympathetic nerves only,
- E. CNS  $\alpha_2$  receptors activation exerts a negative feedback on sympathetic outflow,
- F.  $\beta_3$  adrenergic receptors occur mainly on fat cells.

**47- The following statements are correct, EXCEPT:**

- B. Sympathetic preganglionic fibres originate from all thoracic and the upper 3 lumbar segments,
- C. Parasympathetic sacral outflow passes through (S2 , S3 and S4),
- D. Parasympathetic postganglionic fibres are much longer than preganglionic fibres, **XXX**
- E. Parathion is an irreversible anti-cholinesterase agent,
- F. Pilocarpine is a parasympathomimetic alkaloid.

**48- The following statements are correct, EXCEPT:**

- A.  $\beta_2$  adrenergic receptors exist as either postsynaptic or presynaptic receptors,
- B. Alpha-methyl DOPA is decarboxylated and hydroxylated to alpha-methyl noradrenalin,
- C. Noradrenalin inhibits tyrosine hydroxylase leading to its synthesis regulation,
- D. Noradrenalin is converted to adrenaline by N-methyl transferase,
- E. Dopamine is converted to noradrenaline by DOPA decarboxylase. **XXX**

**49- The following statements are correct, EXCEPT:**

- A. For NE degradation, the enzymatic activity must precede its tissue uptake, **XXX**
- B.  $\beta_2$  adrenergic receptors stimulation leads to bronchodilatation,
- C. Yohimbine blocks  $\alpha_2$  – receptors , causing increase of NE release,
- D. Released NE exerts an auto inhibitory feedback mechanism on adrenergic nerve terminals,
- E. The extra neuronal uptake of circulating NE is blocked by glucocorticoids.

**50- The following statements are correct EXCEPT:**

- A. Tyramine rich food ingestion with MAO inhibitors therapy leads to hypertensive crises.
- B. Urinary excretion of vanilmandelic acid is markedly increased in Phaeochromocytoma,
- C. Isoprenaline is a selective beta adrenergic receptor agonist, **XXX**
- D. Ephedrine induces its sympathomimetic effect by direct and indirect mechanisms,
- E. Depletion of catecholamine stores leads to supersensitivity of adrenergic receptors.

**51- The following adrenoceptor agonists are truly classified according to their selectivity, Except:**

- A.  $\alpha_1$  – selective agonists, e.g. Phenylephrine
- B.  $\alpha_2$  – selective agonists, e.g. Clonidine
- C. Non-selective  $\beta$  agonists, e.g. Dobutamine.
- D. Non-selective  $\alpha$  Agonist, e.g. Adrenaline.
- E.  $\beta_2$  – selective agonists: e.g. Salbutamol.

XXX

**52- Which of the following alpha adrenergic blockers has parasympathomimetic effect on GIT?**

- B. Phenoxybenzamine:
- C. Phentolamine
- D. Prazosin
- E. Yohimbine
- F. Ergotamine

XXX

**53- The following statements concerning Ergot Alkaloids are true, EXCEPT:**

- A. They have strong structure similarity with NE.
- B. Ergotamine has alpha blocking effect.
- C. Ergotamine has direct vasodilatation effect.
- D. Ergometrine has an oxytocic action.
- E. They Stimulate Cardio inhibitory Centre.

XXX

**54- The adrenergic neurone blockers are therapeutically indicated in the following, EXCEPT:**

- A. Guanethidines, is only clinically used in management of moderate or sever refractory hypertension,
- B. Reserpine is used in mild and moderate hypertension,
- C. Alpha methyl DOPA is indicated in mild and moderate hypertension of pregnant women,
- D. Reserpine is used for management of ejaculation failure,
- E. Reserpine has further CNS therapeutic indications.

XXX

**55- The general properties of the ideal local anaesthetic agents include the following, EXCEPT:**

- A. Effective at a concentration that has low systemic toxicity,
- B. Quick onset of action should be,
- C. Long duration of action,
- D. Soluble in water and stable,
- E. Resist deterioration by the heat of sterilization.

XXX

**56- The complications of spinal anaesthesia include the following, EXCEPT:**

- A. Tachycardia,
- B. Respiratory depression,
- C. Headache,
- D. Hypotension,
- E. Postoperative retention of urine.

XXX

**57- Concerning nerve-block anaesthesia, the following statements are correct, EXCEPT:**

- A. Local anaesthetics are injected close to nerve trunks,
- B. Local anaesthetics are injected into epidural space,
- C. It is used for surgery and analgesia,

XXX

- D. It carries the disadvantages of using drug dose close to the maximally tolerated dose,
- E. The onset of action is slow.

**1. Cholinergic Muscarinic ( $M_1$ ) receptors are mainly present in the following, EXCEPT:**

- A. Cerebral cortex.
- B. Gastric parietal cells.
- C. Cardiac conducting tissues XXX
- D. Hypothalamus.
- E. Autonomic Ganglia.

**2. All the following about cholinergic pathway in the body are true EXCEPT:**

- A.  $M_2$  receptor stimulation depresses cardiac function
- B.  $M_3$  receptor stimulation depresses endothelial nitric oxide release XXX
- C.  $M_3$  receptor stimulation promotes urination
- D.  $N_N$  receptor stimulation promotes autonomic ganglia stimulation
- E.  $N_N$  receptor stimulation promotes noradrenaline release from adrenal medulla

**3. All the following about cholinergic pathway in the body are true EXCEPT:**

- A.  $N_N$  receptor stimulation releases adrenaline from adrenal medulla
- B.  $N_N$  receptor stimulation stimulates autonomic ganglia
- C.  $M_3$  receptor stimulation releases nitric oxide from endothelium of blood vessels
- D.  $M_3$  receptor stimulation is vasodilatory in blood vessels
- E. Release of acetylcholine is blocked in organophosphorous insecticide poisoning

**4. All the following about cholinergic pathway in the body are true EXCEPT:**

- A.  $M_2$  receptor stimulation depresses cardiac function
- B.  $M_3$  receptor stimulation depresses endothelial nitric oxide release XXX
- C.  $M_3$  receptor stimulation promotes urination
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**5. All the following about cholinergic pathway in the body are true EXCEPT:**

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- E.  $N_N$  receptor stimulation promotes noradrenaline release from adrenal medulla

**6. All the following about cholinergic pathway in the body are true EXCEPT:**

- A. Release of acetylcholine is blocked in organophosphorous insecticide poisoning XXX
- B.  $N_N$  receptor stimulation releases adrenaline from adrenal medulla
- C.  $N_N$  receptor stimulation stimulates autonomic ganglia
- D.  $M_3$  receptor stimulation releases nitric oxide from endothelium of blood vessels
- E.  $M_3$  receptor stimulation is vasodilatory in blood vessels

**7. All the following about direct-acting cholinoreceptor agonists are correct, EXCEPT:**

- A. A. Bethanechol is used to treat post-labour urinary retention
- B. B. Bethanechol has longer duration of action than Ach
- C. C. Bethanechol has useful potent nicotinic stimulant effects XXX
- D. D. Carbachol is used topically in treatment of glaucoma
- E. E. Pilocarpine is a natural alkaloid resistant to cholinesterase enzymes

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**9. 65. All the following about cholinomimetics are true EXCEPT:**

- A. A. Neostigmine is useful in treatment of reversible NM blocker poisoning
- B. B. Edrophonium injection improves muscle weakness of myasthenic crisis
- C. C. Bethanechol injection is useful in treatment of paralytic ileus
- D. D. Donepezil is an reversible CE inhibitor useful in Alzheimer disease
- E. E. Physopstigmine is contraindicated in glaucoma

XXX

**10. All the following about direct cholinomimetics are true EXCEPT:**

- A. Carbachol has stimulant effects on autonomic ganglia
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- E. Pilocarpine increases salivation in xerostomia

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- C. C. Bethanechol has useful potent nicotinic stimulant effects
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- B. Bethanechol is indicated in postoperative paralytic ileus
- C. Bethanechol is indicated in bronchial asthma      XXX
- D. Pilocarpine increases aqueous humor drainage in glaucoma
- E. Pilocarpine increases salivation in xerostomia

**14. 1. Pilocarpine fulfills the following, Except:**

- A. Is a quaternary ammonium compound.      XXX
- B. Is a simple alkaloid.
- C. Its cholinomimetic action lasts for 24 hours.
- D. It crosses the conjunctival membrane.
- E. It has potent effect on the secretory glands.

**15. 47- The following statements are correct, Except:**

- A. Sympathetic preganglionic fibres originate from all thoracic and the upper 3 lumbar segments,
- B. Parasympathetic sacral outflow passes through (S2 , S3 and S4),
- C. Parasympathetic postganglionic fibres are much longer than preganglionic fibres,      XXX
- D. Parathion is an irreversible anti-cholinesterase agent,
- E. Pilocarpine is a parasympathomimetic alkaloid.

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- D. Parathion is an irreversible anti-cholinesterase agent,
- E. Pilocarpine is a parasympathomimetic alkaloid.

**Salim End –Course Exam**

**8. Which of the following about drugs & adverse effects is FALSE?**

- F. Amphetamines produce psychosis on chronic use
- G. Salbutamol produces hypokalemia when given parenterally
- H. Dobutamine produces heart failure when given early after myocardial infarction **XXX**
- I. Oxymetazoline produces nasal mucosal atrophy with prolonged use
- J. Prazocin produces mild tachycardia

**9. Which of the following statements about drugs is FALSE?**

- A. Pseudoephedrine is useful as nasal mucosal decongestant
- B. Adrenaline should be avoided in hyperthyroidism
- C. Phenylephrine is useful as pressor agent during spinal anaesthesia
- D. Doxazosin should be avoided in benign prostatic hypertrophy **XXX**
- E. Phentolamine is useful in clonidine withdrawal hypertensive crisis

**10. Which of the following statements about beta-agonists is FALSE?**

- A. Salmeterol is useful in prevention of nocturnal asthmatic attacks
- B. Terbutaline is useful in treatment of acute asthmatic attacks
- C. Salbutamol is useful in prevention of premature labour
- D. Ritodrine is a uterine relaxant agent
- E. Isoprenaline is a useful vasodilator in heart failure **XXX**

**11. Which of the following statements about beta-blockers is FALSE?**

- A. Esmolol is useful in supraventricular tachycardia
- B. Pindolol should be avoided in angina pectoris patients with bradycardia **XXX**
- C. Atenolol is useful after acute myocardial infarction
- D. Metoprolol is useful in moderate heart failure with high sympathetic tone
- E. Timolol reduces aqueous humour production

**12. Which of the following statements about adrenaline is FALSE?**

- A. Enhances platelet aggregation
- B. Reduces high IOP in acute close angle glaucoma **XXX**
- C. Antagonizes physiologically actions of histamine in anaphylactic shock
- D. Reduces release of vasoactive substances from mast cells
- E. Is contraindicated in patients taking tricyclic anti-depressants

**13. Which of the following statements about drugs is FALSE?**

- A. Methyldopa inhibits sympathetic outflow from medulla
- B. Noradrenaline is a useful vasoconstrictor during local anaesthesia
- C. Ephedrine enhances neuromuscular transmission in myasthenia gravis

- D. Metyrosine inhibits synthesis of endogenous catecholamines
- E. Parenteral labetalol precipitates hypertensive crisis in susceptible patients **XXX**

**14. Which of the following statements about local anaesthesia is FALSE?**

- A. Tetracaine is an ester useful in spinal anaesthesia
- B. Bupivacaine is an amide useful in obstetric procedures
- C. Local infiltration of xylocaine in fingers & toes is safe
- D. Dissociation of LA is enhanced in inflamed tissues **XXX**
- E. Cocaine has vasoconstrictor effect

**Saed End Course Exam**

**15. All the following of cholinergic antagonists in the GIT are correct, EXCEPT:**

- A. Decrease salivation
- B. Decrease acid secretion
- C. Decrease motility
- D. Decrease intestinal transit time **XXX**
- E. Have anti-diarrhoeal and anti-spasmodic effects

**16. All the following statements about atropine are correct, EXCEPT:**

- A. Is considered as prototype for parasympatolytics
- B. Is a natural tertiary amine
- C. Has well absorption and wide distribution
- D. Is completely metabolized by the liver **XXX**
- E. Blocks all 3 subtypes of muscarinic receptors

**17. All the following adverse effects of direct cholinomimetic agents are correct, EXCEPT:**

- A. Excessive sweating and salivation
- B. Hypotension
- C. Constipation **XXX**
- D. Bronchospasm
- E. Impaired eye accommodation to far vision

18. All the following statements about neostigmine are correct, EXCEPT:

- F. It is a reversible inhibitor of cholinesterase enzyme
- G. It can be given orally and subcutaneously
- H. It causes marked central effects like confusion **XXX**
- I. It is useful as an antidote to competitive NM-blocker agents (tubocurarine-like drugs)
- J. Its is used in myasthenia gravis to improve muscle weakness

1. **Stimulation of muscarinic receptors produces all followings effects EXCEPT:**
  - A. Reduction of heart rate
  - B. Reduction of blood pressure
  - C. Miosis
  - D. Increases intraocular pressure XX
  - E. Increases intestinal motility
  
2. **All followings are adverse effects of direct cholinomimetic agonists EXCEPT:**
  - A. Bronchodilatation XX
  - B. Impaired the eye accommodation to far vision
  - C. Hypotension
  - D. Abdominal colic
  - E. Increase exocrine gland secretion
  
3. **All the followings are uses of indirect acting cholinomimetics EXCEPT:**
  - A. Donepezil to improve cognition function in Alzheimer's disease
  - B. Physostigmine to stimulate bowel and bladder function
  - C. Pyridostigmine to improve muscle weakness in myasthenia gravis
  - D. Neostigmine is useful in diagnosis of myasthenia gravis XX
  - E. Physostigmine is useful to treat glaucoma
  
4. **All the followings are adverse effects of antimuscarinic drugs EXCEPT:**
  - A. Dry mouth
  - B. Bradycardia XX
  - C. Constipation
  - D. Hyperthermia
  - E. Mydriasis
  
5. **Antimuscarinic drugs are useful in all followings conditions EXCEPT:**
  - A. Motion sickness
  - B. Bronchial asthma
  - C. Constipation XX
  - D. Intestinal colic
  - E. Hyperhidrosis
  
6. **All the followings are anticholinergic antimuscarinic drugs EXCEPT:**
  - A. Hyoscine butylbromide
  - B. Ipratropium

- C. Benzhexol
- D. Pirenzepine
- E. Phenthiazines XX

### Salim End –Course Exam

#### 19. Which of the following about drugs & adverse effects is FALSE?

- K. Amphetamines produce psychosis on chronic use
- L. Salbutamol produces hypokalemia when given parenterally
- M. Dobutamine produces heart failure when given early after myocardial infarction **XXX**
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**Saed End Course Exam**

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- N. It is useful as an antidote to competitive NM-blocker agents (tubocurarine-like drugs)
- O. Its is used in myasthenia gravis to improve muscle weakness

**Pharmacology: 1-12 (12)**

**2. Reversible anti-cholinesterase are indicated in the following conditions, EXCEPT:**

- A. Antidepressant toxicity provided being tertiary amine compounds.
- B. Postoperative stimulation of bowels motility.
- C. Glaucoma.
- D. Over dosage of competitive neuromuscular blockers. **XXX**
- E. Myasthenia gravis' diagnosis.

**3. Organophosphate toxicity management includes the following, EXCEPT:**

- A. Sucking away secretions from air passages.
- B. Blocking of exaggerated muscarinic effects.
- C. Administration of Cholinesterase activators as an antidote. **XXX**
- D. Administration of oximes, within 12 hours of toxicity.
- E. Washing of contaminated skin with sodium bicarbonate.

**5. Ergot Alkaloids have the following criteria, EXCEPT:**

- F. They have similar structure as dopamine.
- G. Ergotamine has direct vasoconstrictor effect.
- H. Ergometrine has an oxytocic action.
- I. They stimulate the vasomotor centre. **XXX**
- J. They Stimulate CTZ.

**6. Concerning Alpha methyl DOPA, the following statements are true, EXCEPT:**

- A. Within the adrenergic neurons, it is converted into a false transmitter.
- B.  $\alpha$  - methyl noradrenaline acts as a false transmitter.
- C. The  $\alpha$ -methyl noradrenaline is demethylated within the neurons by MAO. **XXX**
- D. The  $\alpha$ -methyl noradrenaline is not demethylated within the neurons.
- E. The  $\alpha$ -methyl noradrenaline stimulates presynaptic  $\alpha_2$  – receptors.

**7. The  $\beta_2$  – adrenergic mediated adverse effects include the following, EXCEPT:**

- A. Bronchoconstriction.
- B. First degree heart block **XXX**
- C. Cold extremities.

- D. Claudication.
- E. Prolongation of insulin hypoglycaemia.

**8. The following statements concerning Clonidine are true, EXCEPT:**

- F. It suppresses sympathetic outflow.
- G. It has a direct peripheral vasoconstrictor action. **XXX**
- H. In overdose, it increases blood pressure.
- I. It is indicated in Preanaesthetic medication.
- J. It is indicated in moderate renal induced hypertension.

**9. The lipophilic Beta adrenergic blockers are characterised by the following, EXCEPT:**

- A. Exposed to first pass elimination.
- B. Extensively metabolized by the liver.
- C. Cross blood brain barrier.
- D. Eliminated unchanged by the kidney. **XXX**
- E. Their half life time and duration of action are short.

**10. The following statements are true, EXCEPT:**

- A. The sequence of anaesthetic nerve affection starts with loss of pin prick sensation. **XXX**
- B. Ideal local anaesthetics should not be deteriorated by the heat of sterilization.
- C. Esters form of local anaesthetics has short duration of action.
- D. Amide form of local anaesthetics has long plasma  $t_{1/2}$ .
- E. Specific receptor theory postulates specific sites of local anaesthetics binding.

**11. The following statements are true, EXCEPT:**

- A. Local anaesthetics are generally directed into blockade of a nerve area.
- B. At therapeutic doses all local anaesthetics are vasodilators except cocaine.
- C. Co-administration of adrenaline with a local anaesthetic prolongs duration of action.
- D. Chlorprocaine is a short – acting local anaesthetic agent. **XXX**
- E. Curare-like action of local anaesthetics is due to stabilization of neuromuscular junction membranes.

**12. Allergic adverse drug reactions of local anaesthetics are characterized by, EXCEPT:**

- A. Allergic dermatitis
- B. Usually associated with amide type drugs. **XXX**
- C. Mucosal irritation.
- D. Induced particularly with cocaine.
- E. Methaemoglobinaemia.

## PHARMACOLGY

### 46. The following statements are correct EXCEPT:

- G. Atropine effect on the eye lasts for 7 days or more after its local application,
- H. Continuous tissue exposure to adrenergic agonists leads to up regulation of receptors, **XXX**
- I. Constrictor pupillae muscle is innervated with parasympathetic nerves only,
- J. CNS  $\alpha_2$  receptors activation exerts a negative feedback on sympathetic outflow,
- K.  $\beta_3$  adrenergic receptors occur mainly on fat cells.

### 48- The following statements are correct, EXCEPT:

- F.  $\beta_2$  adrenergic receptors exist as either postsynaptic or presynaptic receptors,
- G. Alpha-methyl DOPA is decarboxylated and hydroxylated to alpha-methyl noradrenalin,
- H. Noradrenalin inhibits tyrosine hydroxylase leading to its synthesis regulation,
- I. Noradrenalin is converted to adrenaline by N-methyl transferase,
- J. Dopamine is converted to noradrenaline by DOPA decarboxylase. **XXX**

### 49- The following statements are correct, EXCEPT:

- F. For NE degradation, the enzymatic activity must precede its tissue uptake, **XXX**
- G.  $\beta_2$  adrenergic receptors stimulation leads to bronchodilatation,
- H. Yohimbine blocks  $\alpha_2$  – receptors , causing increase of NE release,
- I. Released NE exerts an auto inhibitory feedback mechanism on adrenergic nerve terminals,
- J. The extra neuronal uptake of circulating NE is blocked by glucocorticoids.

### 50- The following statements are correct EXCEPT:

- F. Tyramine rich food ingestion with MAO inhibitors therapy leads to hypertensive crises.
- G. Urinary excretion of vanilmandelic acid is markedly increased in Phaeochromocytoma,
- H. Isoprenaline is a selective beta adrenergic receptor agonist, **XXX**
- I. Ephedrine induces its sympathomimetic effect by direct and indirect mechanisms,
- J. Depletion of catecholamine stores leads to supersensitivity of adrenergic receptors.

### 51- The following adrenoceptor agonists are truly classified according to their selectivity, Except:

- F.  $\alpha_1$  – selective agonists, e.g. Phenylephrine
- G.  $\alpha_2$  – selective agonists, e.g. Clonidine
- H. Non-selective  $\beta$  agonists, e.g. Dobutamine. **XXX**
- I. Non-selective  $\alpha$  Agonist, e.g. Adrenaline.

J.  $\beta_2$  – selective agonists: e.g. Salbutamol.

**52- Which of the following alpha adrenergic blockers has parasympathomimetic effect on GIT?**

- G. Phenoxybenzamine:
- H. Phentolamine XXX
- I. Prazosin
- J. Yohimbine
- K. Ergotamine

**53- The following statements concerning Ergot Alkaloids are true, EXCEPT:**

- F.They have strong structure similarity with NE.
- G. Ergotamine has alpha blocking effect.
- H. Ergotamine has direct vasodilatation effect. XXX
- I. Ergometrine has an oxytocic action.
- J. They Stimulate Cardio inhibitory Centre.

**54- The adrenergic neurone blockers are therapeutically indicated in the following, EXCEPT:**

- K. Guanethidines, is only clinically used in management of moderate or sever refractory hypertension,
- L. Reserpine is used in mild and moderate hypertension,
- M. Alpha methyl DOPA is indicated in mild and moderate hypertension of pregnant women,
- N. Reserpine is used for management of ejaculation failure, XXX
- O. Reserpine has further CNS therapeutic indications.

**55- The general properties of the ideal local anaesthetic agents include the following, EXCEPT:**

- F.Effective at a concentration that has low systemic toxicity,
- G. Quick onset of action should be,
- H. Long duration of action, XXX
- I. Soluble in water and stable,
- J. Resist deterioration by the heat of sterilization.

**56- The complications of spinal anaesthesia include the following, EXCEPT:**

- K. Tachycardia, XXX
- L. Respiratory depression,
- M. Headache,
- N. Hypotension,

O. Postoperative retention of urine.

**57- Concerning nerve-block anaesthesia, the following statements are correct, EXCEPT:**

- F. Local anaesthetics are injected close to nerve trunks,
- G. Local anaesthetics are injected into epidural space, **XXX**
- H. It is used for surgery and analgesia,
- I. It carries the disadvantages of using drug dose close to the maximally tolerated dose,
- J. The onset of action is slow.

### PHARMACOLOGY

**64. All the following statements about drugs & the eye are true EXCEPT:**

- A. Timolol reduces aqueous humour production in glaucoma
- B. Atropine reduces aqueous humour drainage in glaucoma
- C. Pilocarpine increases aqueous humor drainage & impairs accommodation to darkness
- D. Adrenaline reduces high IOP in open angle glaucoma by producing vasoconstriction in blood vessels of ciliary body
- E. Phenylephrine produces mydriasis with impaired accommodation to far vision **XXX**

**66. All the following about organophosphorous insecticide poisoning are true EXCEPT:**

- A. Isoflurophate (DFP) may be a cause
- B. Presents with cardiovascular depression
- C. Atropine given early to counteract excessive muscarinic effects
- D. Pralidoxime given early to counteract excessive nicotinic effects **XXX**
- E. Diazepam may be needed for convulsions

**67. All the following are pharmacodynamic actions of anti-muscarinic agents EXCEPT:**

- A. Tachycardia

- B. Constipation
- C. Increase IOP
- D. Excessive relaxation of urinary bladder wall
- E. Excessive nausea & vomiting XXX

**68. All the following are indications for anti-muscarinic agents EXCEPT:**

- A. Atropine eye drop: synechia following iritis
- B. Benztropine: drug-induced parkinsonism
- C. Ipratropium: motion sickness XXX
- D. Hyoscine: premedication therapy
- E. Clidinium: antispasmodic

**69. All the following statements about sympathomimetics are true EXCEPT:**

- A. Methoxamine is indicated to increase blood pressure during halothane anaesthesia
- B. Pseudoephedrine is indicated as decongestant in allergic rhinitis
- C. Clonidine is indicated in shock with low sympathetic tone XXX
- D. Amphetamine is indicated in narcolepsy
- E. Ephedrine is indicated in myasthenia gravis

**70. All the following statements about beta stimulants are true EXCEPT:**

- A. Dobutamine is useful in shock with oliguria XXX
- B. Salbutamol is useful in prevention of premature labour
- C. Salmeterol is useful in prophylaxis of nocturnal asthma
- D. Isoprenaline is useful in cardiac arrest
- E. Salbutamol is useful in heart failure

**71. All the following statements about alpha-blockers are true EXCEPT**

- A. Phenoxybenzamine is indicated in benign prostatic hypertrophy
- B. Phentolamine is indicated in hypertensive crisis with high catecholamines in blood
- C. Doxazosin produces more tachycardia than phenoxybenzamine **XXX**
- D. Labetalol is indicated orally in phaeochromocytoma
- E. Carvedilol is useful in moderate heart failure

**72. All the following statements about beta-blockers are true EXCEPT**

- A. Propranolol decreases pressure in portal hypertension
- B. Esmolol administration precipitates cardiac arrhythmias **XXX**
- C. Atenolol early administration reduces infarction size
- D. Metoprolol is cardioprotective in angina pectoris
- E. Pindolol causes less fall in resting heart rate than propranolol

**73. Vasoconstrictors with local anaesthesia should be avoided in all the following EXCEPT:**

- A. Cardiovascular disease
- B. Halothane general anaesthesia
- C. Fingers & toes surgery
- D. Oral & teeth surgery **XXX**
- E. Tricyclic antidepressant therapy

**74. All the following about local anaesthesia are true EXCEPT:**

- A. Convulsions may occur with high doses
- B. Hypotension may follow spinal anaesthesia

- C. Amides are useful for painful mucous membrane lesions
- D. Esters are useful before endoscopy
- E. Ethyl chloride acts as an LA by local cooling of tissues

XXX

**43. All the following about indirect cholinomimetics are true EXCEPT:**

- A. Neostigmine is useful in treatment of reversible NM blocker poisoning
- B. Edrophonium injection aggravates muscle weakness of cholinergic crisis
- C. Pyridostigmine is a reversible CE inhibitor useful orally in myasthenia gravis
- D. Donepezil is an irreversible CE inhibitor (CEI) useful as insecticide
- E. Isoflurophate (DFP) is an irreversible CEI insecticide useful in glaucoma

**44. All the following about organophosphorous insecticide poisoning are true EXCEPT:**

- A. Presents with cardiovascular depression
- B. Presents with respiratory depression
- C. Atropine given early to counteract excessive muscarinic effects
- D. Pralidoxime given early to counteract excessive nicotinic effects
- E. Diazepam may be needed for convulsions

**45. All the following about anti-muscarinic agents are true EXCEPT:**

- A. Hyoscine has anti-emetic effect
- B. Hyoscine is useful as premedication before anaesthesia
- C. Benztropine overdose may precipitate acute dystonia reactions
- D. Atropine eye drop is useful to prevent synechia following iritis
- E. Atropine is useful in treatment of bradycardia after acute myocardial infarction

**46. All the following statements about anti-muscarinic agents are true EXCEPT:**

- A. Constipation is an adverse effect
- B. Hyperthermia may occur with high doses
- C. Should be avoided in patients with glaucoma
- D. Should be avoided in patients with benign prostatic hypertrophy
- E. Should be avoided in patients with chronic obstructive airway disease

**A**

**47. All the following statements about adrenergic pathway are true EXCEPT:**

- A. Main mechanism of termination of noradrenalin action is reuptake into nerve terminals
- B. Cocaine inhibits noradrenalin reuptake
- C. Catecholamines should be given parenterally
- D. Catecholamine agents have more central effects than non-catecholamines

E. Synthesis of catecholamines is blocked by metyrosine

**48. All the following about adrenergic receptor stimulation are true EXCEPT:**

- A. Alpha-1 stimulation inhibits K entry into cells
- B. Alpha-2 stimulation inhibits noradrenalin release
- C. Alpha-2 stimulation inhibits platelet aggregation
- D. Beta-2 stimulation inhibits uterine contractions
- E. Beta-2 stimulation inhibits autacoids release from mast cells

**49. All the following statements about adrenaline are true EXCEPT:**

- A. Large doses increase systolic & diastolic blood pressure
- B. Acts as a physiological antagonist when used in anaphylactic shock
- C. Is useful to correct hypotension during halothane anaesthesia
- D. Reduces high IOP by producing vasoconstriction in blood vessels of ciliary body
- E. Produces tremor

**50. All the following statements about beta-blockers are true, EXCEPT**

- A. When needed in diabetes mellitus, cardioselective agents are preferred,
- B. Timolol reduces IOP by increasing aqueous humor drainage by ciliary body,
- C. Carvedilol is useful in moderate heart failure
- D. Lipid-soluble agents are to be avoided in liver disease
- E. Water-soluble agents are to be avoided in renal disease

**51. All the following statements about local anaesthesia are true EXCEPT:**

- A. Amides are useful for painful mucous membrane lesions
- B. Amides are useful before endoscopy
- C. Amides should be avoided with halothane general anaesthesia
- D. C-fibres are the first fibers affected by the LA due to their large number
- E. Felypressin is used with LA in patients with cardiovascular disease

**52. All the following adverse effects of local anaesthesia are true EXCEPT:**

- A. Keratitis after repeated applications to the eye
- B. Ventricular ectopics after lignocaine use
- C. Convulsions with high doses
- D. Hypotension following spinal anaesthesia
- E. Precipitation of asthmatic attacks

**Pharmacology: 1-12 (12)**

**2. Reversible anti-cholinesterase are indicated in the following conditions, EXCEPT:**

- F. Antidepressant toxicity provided being tertiary amine compounds.
- G. Postoperative stimulation of bowels motility.
- H. Glaucoma.
- I. Over dosage of competitive neuromuscular blockers. **XXX**
- J. Myasthenia gravis' diagnosis.

**3. Organophosphate toxicity management includes the following, EXCEPT:**

- F. Sucking away secretions from air passages.
- G. Blocking of exaggerated muscarinic effects.
- H. Administration of Cholinesterase activators as an antidote. **XXX**
- I. Administration of oximes, within 12 hours of toxicity.
- J. Washing of contaminated skin with sodium bicarbonate.

**5. Ergot Alkaloids have the following criteria, EXCEPT:**

- P. They have similar structure as dopamine.
- Q. Ergotamine has direct vasoconstrictor effect.
- R. Ergometrine has an oxytocic action.
- S. They stimulate the vasomotor centre. **XXX**
- T. They Stimulate CTZ.

**6. Concerning Alpha methyl DOPA, the following statements are true, EXCEPT:**

- A. Within the adrenergic neurons, it is converted into a false transmitter.
- B.  $\alpha$  - methyl noradrenaline acts as a false transmitter.
- C. The  $\alpha$ -methyl noradrenaline is demethylated within the neurons by MAO. **XXX**
- D. The  $\alpha$ -methyl noradrenaline is not demethylated within the neurons.
- E. The  $\alpha$ -methyl noradrenaline stimulates presynaptic  $\alpha_2$  – receptors.

**7. The  $\beta_2$  – adrenergic mediated adverse effects include the following, EXCEPT:**

- F. Bronchoconstriction.
- G. First degree heart block **XXX**
- H. Cold extremities.

- I. Claudication.
- J. Prolongation of insulin hypoglycaemia.

**8. The following statements concerning Clonidine are true, EXCEPT:**

- P. It suppresses sympathetic outflow.
- Q. It has a direct peripheral vasoconstrictor action. **XXX**
- R. In overdose, it increases blood pressure.
- S. It is indicated in Preanaesthetic medication.
- T. It is indicated in moderate renal induced hypertension.

**9. The lipophilic Beta adrenergic blockers are characterised by the following, EXCEPT:**

- A. Exposed to first pass elimination.
- B. Extensively metabolized by the liver.
- C. Cross blood brain barrier.
- D. Eliminated unchanged by the kidney. **XXX**
- E. Their half life time and duration of action are short.

**10. The following statements are true, EXCEPT:**

- F. The sequence of anaesthetic nerve affection starts with loss of pin prick sensation. **XXX**
- G. Ideal local anaesthetics should not be deteriorated by the heat of sterilization.
- H. Esters form of local anaesthetics has short duration of action.
- I. Amide form of local anaesthetics has long plasma  $t_{1/2}$ .
- J. Specific receptor theory postulates specific sites of local anaesthetics binding.

**11. The following statements are true, EXCEPT:**

- F. Local anaesthetics are generally directed into blockade of a nerve area.
- G. At therapeutic doses all local anaesthetics are vasodilators except cocaine.
- H. Co-administration of adrenaline with a local anaesthetic prolongs duration of action.
- I. Chlorprocaine is a short – acting local anaesthetic agent. **XXX**
- J. Curare-like action of local anaesthetics is due to stabilization of neuromuscular junction membranes.

**12. Allergic adverse drug reactions of local anaesthetics are characterized by, EXCEPT:**

- F. Allergic dermatitis
- G. Usually associated with amide type drugs. **XXX**
- H. Mucosal irritation.
- I. Induced particularly with cocaine.
- J. Methaemoglobinaemia.



46. The following statements are correct EXCEPT:

- L. Atropine effect on the eye lasts for 7 days or more after its local application,
- M. Continuous tissue exposure to adrenergic agonists leads to up regulation of receptors, **XXX**
- N. Constrictor pupillae muscle is innervated with parasympathetic nerves only,
- O. CNS  $\alpha_2$  receptors activation exerts a negative feedback on sympathetic outflow,
- P.  $\beta_3$  adrenergic receptors occur mainly on fat cells.

48- The following statements are correct, EXCEPT:

- K.  $\beta_2$  adrenergic receptors exist as either postsynaptic or presynaptic receptors,
- L. Alpha-methyl DOPA is decarboxylated and hydroxylated to alpha-methyl noradrenalin,
- M. Noradrenalin inhibits tyrosine hydroxylase leading to its synthesis regulation,
- N. Noradrenalin is converted to adrenaline by N-methyl transferase,
- O. Dopamine is converted to noradrenaline by DOPA decarboxylase. **XXX**

49- The following statements are correct, EXCEPT:

- K. For NE degradation, the enzymatic activity must precede its tissue uptake, **XXX**
- L.  $\beta_2$  adrenergic receptors stimulation leads to bronchodilatation,
- M. Yohimbine blocks  $\alpha_2$  – receptors , causing increase of NE release,
- N. Released NE exerts an auto inhibitory feedback mechanism on adrenergic nerve terminals,
- O. The extra neuronal uptake of circulating NE is blocked by glucocorticoids.

50- The following statements are correct EXCEPT:

- K. Tyramine rich food ingestion with MAO inhibitors therapy leads to hypertensive crises.
- L. Urinary excretion of vanilmandelic acid is markedly increased in Phaeochromocytoma,
- M. Isoprenaline is a selective beta adrenergic receptor agonist, **XXX**
- N. Ephedrine induces its sympathomimetic effect by direct and indirect mechanisms,
- O. Depletion of catecholamine stores leads to supersensitivity of adrenergic receptors.

51- The following adrenoceptor agonists are truly classified according to their selectivity, Except:

- K.  $\alpha_1$  – selective agonists, e.g. Phenylephrine
- L.  $\alpha_2$  – selective agonists, e.g. Clonidine
- M. Non-selective  $\beta$  agonists, e.g. Dobutamine. **XXX**
- N. Non-selective  $\alpha$  Agonist, e.g. Adrenaline.
- O.  $\beta_2$  – selective agonists: e.g. Salbutamol.

52- Which of the following alpha adrenergic blockers has parasympathomimetic effect on GIT?

- L. Phenoxybenzamine:
- M. Phentolamine XXX
- N. Prazosin
- O. Yohimbine
- P. Ergotamine

**53- The following statements concerning Ergot Alkaloids are true, EXCEPT:**

- K. They have strong structure similarity with NE.
- L. Ergotamine has alpha blocking effect.
- M. Ergotamine has direct vasodilatation effect. XXX
- N. Ergometrine has an oxytocic action.
- O. They Stimulate Cardio inhibitory Centre.

**54- The adrenergic neurone blockers are therapeutically indicated in the following, EXCEPT:**

- U. Guanethidines, is only clinically used in management of moderate or sever refractory hypertension,
- V. Reserpine is used in mild and moderate hypertension,
- W. Alpha methyl DOPA is indicated in mild and moderate hypertension of pregnant women,
- X. Reserpine is used for management of ejaculation failure, XXX
- Y. Reserpine has further CNS therapeutic indications.

**55- The general properties of the ideal local anaesthetic agents include the following, EXCEPT:**

- K. Effective at a concentration that has low systemic toxicity,
- L. Quick onset of action should be,
- M. Long duration of action, XXX
- N. Soluble in water and stable,
- O. Resist deterioration by the heat of sterilization.

**56- The complications of spinal anaesthesia include the following, EXCEPT:**

- U. Tachycardia, XXX
- V. Respiratory depression,
- W. Headache,
- X. Hypotension,
- Y. Postoperative retention of urine.

**57- Concerning nerve-block anaesthesia, the following statements are correct, EXCEPT:**

- K. Local anaesthetics are injected close to nerve trunks,
- L. Local anaesthetics are injected into epidural space, **XXX**
- M. It is used for surgery and analgesia,
- N. It carries the disadvantages of using drug dose close to the maximally tolerated dose,
- O. **The** onset of action is slow.

**64. All the following statements about drugs & the eye are true EXCEPT:**

- A. Timolol reduces aqueous humour production in glaucoma
- B. Atropine reduces aqueous humour drainage in glaucoma
- C. Pilocarpine increases aqueous humor drainage & impairs accommodation to darkness
- D. Adrenaline reduces high IOP in open angle glaucoma by producing  
vasoconstriction in blood vessels of ciliary body
- E. Phenylephrine produces mydriasis with impaired accommodation to far vision **XXX**

**66. All the following about organophosphorous insecticide poisoning are true EXCEPT:**

- F. Isoflurophate (DFP) may be a cause
- G. Presents with cardiovascular depression
- H. Atropine given early to counteract excessive muscarinic effects
- I. Pralidoxime given early to counteract excessive nicotinic effects **XXX**
- J. Diazepam may be needed for convulsions

**67. All the following are pharmacodynamic actions of anti-muscarinic agents EXCEPT:**

- A. Tachycardia
- B. Constipation
- C. Increase IOP
- D. Excessive relaxation of urinary bladder wall
- E. Excessive nausea & vomiting **XXX**

**68. All the following are indications for anti-muscarinic agents EXCEPT:**

- A. Atropine eye drop: synechia following iritis
- B. Bzotropine: drug-induced parkinsonism
- C. Ipratropium: motion sickness **XXX**
- D. Hyoscine: premedication therapy
- E. Clidinium: antispasmodic

**69. All the following statements about sympathomimetics are true EXCEPT:**

- A. Methoxamine is indicated to increase blood pressure during halothane anaesthesia
- B. Pseudoephedrine is indicated as decongestant in allergic rhinitis
- C. Clonidine is indicated in shock with low sympathetic tone **XXX**
- D. Amphetamine is indicated in narcolepsy
- E. Ephedrine is indicated in myasthenia gravis

**70. All the following statements about beta stimulants are true EXCEPT:**

- A. Dobutamine is useful in shock with oliguria **XXX**
- B. Salbutamol is useful in prevention of premature labour
- C. Salmeterol is useful in prophylaxis of nocturnal asthma
- D. Isoprenaline is useful in cardiac arrest
- E. Salbutamol is useful in heart failure

**71. All the following statements about alpha -blockers are true EXCEPT**

- A. Phenoxybenzamine is indicated in benign prostatic hypertrophy
- B. Phentolamine is indicated in hypertensive crisis with high catecholamines in blood
- C. Doxazosin produces more tachycardia than phenoxybenzamine **XXX**
- D. Labetalol is indicated orally in phaeochromocytoma

E. Carvedilol is useful in moderate heart failure

**72. All the following statements about beta-blockers are true EXCEPT**

- A. Propranolol decreases pressure in portal hypertension
- B. Esmolol administration precipitates cardiac arrhythmias **XXX**
- C. Atenolol early administration reduces infarction size
- D. Metoprolol is cardioprotective in angina pectoris
- E. Pindolol causes less fall in resting heart rate than propranolol

**73. Vasoconstrictors with local anaesthesia should be avoided in all the following EXCEPT:**

- A. Cardiovascular disease
- B. Halothane general anaesthesia
- C. Fingers & toes surgery
- D. Oral & teeth surgery **XXX**
- E. Tricyclic antidepressant therapy

**74. All the following about local anaesthesia are true EXCEPT:**

- A. Convulsions may occur with high doses
- B. Hypotension may follow spinal anaesthesia
- C. Amides are useful for painful mucous membrane lesions
- D. Esters are useful before endoscopy **XXX**
- E. Ethyl chloride acts as an LA by local cooling of tissues

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- D. Oral & teeth surgery XXX
- E. Tricyclic antidepressant therapy

**80. All the following about local anaesthesia are true EXCEPT:**

- A. Convulsions may occur with high doses
- B. Hypotension may follow spinal anaesthesia
- C. Amides are useful for painful mucous membrane lesions
- D. Esters are useful before endoscopy XXX
- E. Ethyl chloride acts as an LA by local cooling of tissues

**26. Which of the following about drugs & adverse effects is FALSE?**

- P. Amphetamines produce psychosis on chronic use
- Q. Salbutamol produces hypokalemia when given parenterally
- R. Dobutamine produces heart failure when given early after myocardial infarction
- S. Oxymetazoline produces nasal mucosal atrophy with prolonged use
- T. Prazocin produces mild tachycardia

**27. Which of the following statements about drugs is FALSE?**

- A. Pseudoephedrine is useful as nasal mucosal decongestant
- B. Adrenaline should be avoided in hyperthyroidism
- C. Phenylephrine is useful as pressor agent during spinal anaesthesia
- D. Doxazosin should be avoided in benign prostatic hypertrophy
- E. Phentolamine is useful in clonidine withdrawal hypertensive crisis

- 28. Which of the following statements about beta-agonists is FALSE?**
- Salmeterol is useful in prevention of nocturnal asthmatic attacks
  - Terbutaline is useful in treatment of acute asthmatic attacks
  - Salbutamol is useful in prevention of premature labour
  - Ritodrine is a uterine relaxant agent
  - Isoprenaline is a useful vasodilator in heart failure
- 29. Which of the following statements about beta-blockers is FALSE?**
- Esmolol is useful in supraventricular tachycardia
  - Pindolol should be avoided in angina pectoris patients with bradycardia
  - Atenolol is useful after acute myocardial infarction
  - Metoprolol is useful in moderate heart failure with high sympathetic tone
  - Timolol reduces aqueous humour production
- 30. Which of the following statements about adrenaline is FALSE?**
- Enhances platelet aggregation
  - Reduces high IOP in acute close angle glaucoma
  - Antagonizes physiologically actions of histamine in anaphylactic shock
  - Reduces release of vasoactive substances from mast cells
  - Is contraindicated in patients taking tricyclic anti-depressants
- 31. Which of the following statements about drugs is FALSE?**
- Methyldopa inhibits sympathetic outflow from medulla
  - Noradrenaline is a useful vasoconstrictor during local anaesthesia
  - Ephedrine enhances neuromuscular transmission in myasthenia gravis
  - Metyrosine inhibits synthesis of endogenous catecholamines
  - Parenteral labetalol precipitates hypertensive crisis in susceptible patients
- 32. Which of the following statements about local anaesthesia is FALSE?**
- Tetracaine is an ester useful in spinal anaesthesia
  - Bupivacaine is an amide useful in obstetric procedures
  - Local infiltration of xylocaine in fingers & toes is safe
  - Dissociation of LA is enhanced in inflamed tissues
  - Cocaine has vasoconstrictor effect
- 33. All the following of cholinergic antagonists in the GIT are correct, EXCEPT:**
- Decrease salivation
  - Decrease acid secretion
  - Decrease motility

- D. Decrease intestinal transit time
  - E. Have anti-diarrhoeal and anti-spasmodic effects
- 34. All the following statements about atropine are correct, EXCEPT:**
- A. Is considered as prototype for parasympatolytics
  - B. Is a natural tertiary amine
  - C. Has well absorption and wide distribution
  - D. Is completely metabolized by the liver
  - E. Blocks all 3 subtypes of muscarinic receptors
- 35. All the following adverse effects of direct cholinomimetic agents are correct, EXCEPT:**
- A. Excessive sweating and salivation
  - B. Hypotension
  - C. Constipation
  - D. Bronchospasm
  - E. Impaired eye accommodation to far vision
- 36. All the following statements about neostigmine are correct, EXCEPT:**
- P. It is a reversible inhibitor of cholinesterase enzyme
  - Q. It can be given orally and subcutaneously
  - R. It causes marked central effects like confusion
  - S. It is useful as an antidote to competitive NM-blocker agents (tubocurarine-like drugs)
  - T. Its is used in myasthenia gravis to improve muscle weakness

**3. All the following about indirect cholinomimetics are true EXCEPT:**

- F. Neostigmine is useful in treatment of reversible NM blocker poisoning
- G. Edrophonium injection aggravates muscle weakness of cholinergic crisis
- H. Donepezil is an irreversible CE inhibitor (CEI) useful as insecticide **XXX**
- I. Pyridostigmine is a reversible CE inhibitor useful orally in myasthenia gravis
- J. Isoflurophate (DFP) is an irreversible CEI insecticide useful in glaucoma

**4. All the following about organophosphorous insecticide poisoning are true EXCEPT:**

- A. Presents with cardiovascular depression
- B. Presents with respiratory depression
- C. Atropine given early to counteract excessive muscarinic effects
- D. Pralidoxime given early to counteract excessive nicotinic effects **XXX**
- E. Diazepam may be needed for convulsions

**5. All the following about anti-muscarinic agents are true EXCEPT:**

- F. Benztropine overdose may precipitate acute dystonia reactions **XXX**
- G. Hyoscine has anti-emetic effect
- H. Hyoscine is useful as premedication before anaesthesia
- I. Atropine eye drop is useful to prevent synechia following iritis
- J. Atropine is useful in treatment of bradycardia after acute myocardial infarction

**6. All the following statements about anti-muscarinic agents are true EXCEPT:**

- F. Constipation is an adverse effect
- G. Hyperthermia may occur with high doses
- H. Should be avoided in patients with glaucoma
- I. Should be avoided in patients with benign prostatic hypertrophy
- J. Should be avoided in patients with chronic obstructive airway disease **XXX**

**7. All the following statements about adrenergic pathway are true EXCEPT:**

- F. Main mechanism of termination of noradrenalin action is reuptake into nerve terminals
- G. Cocaine inhibits noradrenalin reuptake
- H. Catecholamines should be given parenterally
- I. Synthesis of catecholamines is blocked by metyrosine
- J. Catecholamine agents have more central effects than non-catecholamines **XXX**

**8. All the following about adrenergic receptor stimulation are true EXCEPT:**

- F. Alpha-1 stimulation inhibits K entry into cells
- G. Alpha-2 stimulation inhibits noradrenalin release
- H. Alpha-2 stimulation inhibits platelet aggregation **XXX**
- I. Beta-2 stimulation inhibits uterine contractions
- J. Beta-2 stimulation inhibits autacoids release from mast cells

**9. All the following statements about adrenaline are true EXCEPT:**

- F. Large doses increase systolic & diastolic blood pressure
- G. Acts as a physiological antagonist when used in anaphylactic shock
- H. Is useful to correct hypotension during halothane anaesthesia **XXX**
- I. Reduces high IOP by producing vasoconstriction in blood vessels of ciliary body
- J. Produces tremor

**10. All the following statements about beta-blockers are true EXCEPT:**

- F. When needed in diabetes mellitus, cardioselective agents are preferred
- G. Lipid-soluble agents are to be avoided in liver disease
- H. Timolol reduces IOP by increasing aqueous humor drainage by ciliary body **XXX**
- I. Carvedilol is useful in moderate heart failure
- J. Water-soluble agents are to be avoided in renal disease

**11. All the following statements about local anaesthesia are true EXCEPT:**

- F. Amides are useful for painful mucous membrane lesions
- G. Amides are useful before endoscopy
- H. Amides should be avoided with halothane general anaesthesia **XXX**
- I. C-fibres are the first fibres affected by the LA due to their large number
- J. Felypressin is used with LA in patients with cardiovascular disease

**12. All the following adverse effects of local anaesthesia are true EXCEPT:**

- F. Keratitis after repeated applications to the eye
- G. Convulsions with high doses
- H. Ventricular ectopics after lignocaine use **XXX**
- I. Hypotension following spinal anaesthesia
- J. Precipitation of asthmatic attacks

# Patho

- 1 **CSF examination in bacterial meningitis would reveal:**
  - A. Many neutrophils and high protein content **XXX**
  - B. Many lymphocytes and high protein content
  - C. Many neutrophils and low protein content
  - D. Presence of oligoclonal band
  - E. Presence of inclusion body
  
- 2 **Regarding Prion disease theory which of the following is a normal cellular protein :**
  - A. PrPc **XXX**
  - B. PrP sc
  - C. PrP res
  - D. PrP res and PrP sc
  - E. PrP mut
  
- 3 **Regarding Prion disease theory which of the following is an/are abnormal protein(s) :**
  - A. PrPc
  - B. PrP sc
  - C. PrP res
  - D. PrP res and PrP sc **XXX**
  - E. PrP mut
  
- 4 **The cerebrospinal fluid in acute pyogenic meningitis:**
  - A. Its usually clear.
  - B. Usually has an increased glucose level.
  - C. Usually has a decreased protein level.
  - D. Contain No or Few numbers of neutrophil polymorphs.
  - E. May show Bacteria on Gram staining. **XXX**
  
- 5 **In chronic tuberculous meningitis, the cerebrospinal fluid:**
  - A. Contains markedly increased numbers of neutrophil polymorphs.
  - B. May show acid-fast bacilli on Ziehl-Neelsen staining. **XXX**
  - C. Usually appears blood stained.
  - D. Usually has increased levels of glucose.
  - E. Is usually at a decreased pressure.
  
- 6 **Herpes simplex encephalitis most commonly involve which region of CNS?**
  - A. Midbrain and pons
  - B. Corpus callosum and basis points

- C. Frontal and temporal lobe **XXX**
- D. Posterior column of the spinal cord
- E. Ependymal lining of ventricles

**7 In viral encephalitis, all the following statements are not true, EXCEPT:**

- A. The target cells in CMV encephalitis is oligodendrocyte
- B. The target cell in CMV encephalitis is astrocyte
- C. HSV type 2 encephalitis is the most common cause of sporadic viral encephalitis
- D. The target cell in CMV encephalitis is ependymal cell
- E. The target cell in HSV type 1 is astrocyte

**8 The cerebrospinal fluid in acute pyogenic meningitis:**

- A. Is usually clear.
- B. Usually has an increased glucose level.
- C. Usually has a decreased protein level.
- D. May show causative bacteria on gram staining. **XXX**
- E. Containing no or few numbers of neutrophils

**9 Bacterial meningitis may result, sooner or later, in the following, EXCEPT:**

- A. Hydrocephalus
- B. Vascular thrombosis and infarction
- C. Abscess formation
- D. Subdural hematoma **XXX**

**24. In poliomyelitis the pathologic findings principally involves the:**

- a. anterior horn cells of the spinal cord X
- b. cerebellum
- c. thalamus
- d. muscle fibres of leg
- e. caudate nucleus

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**25. regarding subacute combined degeneration all the following are true EXCEPT:**

- a. is associated with pernicious anemia
- b. the grey matter of spinal cord is rarely affected
- c. the posterior funiculi and pyramidal tracts undergo degeneration
- d. no improvement with folic acid treatment
- e. usually doesn't cause motor weakness or spasticity X

**26. Which of the following is a acquired demyelinating disease:**

- a. Krabbe disease
- b. Leukodysrtohy
- c. Fatal familial insomnia
- d. General paresis of the insane
- e. Multiple sclerosis X

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**2. Regarding multiple sclerosis all the following are true EXCEPT:**

- A. Shows patchy demyelization irregularly distributed in the brain and spinal cord.
- B. Usually starts in early adulthood.
- C. Usually follows a regular, progressive course. XX
- D. May show an increase in protein concentration of the cerebrospinal fluid.
- E. Often presents as an acute unilateral optic neuritis.

**3. Senile dementia of Alzheimer's type:**

- A. Its commoner in males than in females.
- B. Shows reduced numbers of argyrophilic plaques when examined microscopically.
- C. Often shows primary hydrocephalus.
- D. Usually shows widespread cortical atrophy. XX
- E. Is caused by multiple cerebral infarcts.

**4. Chronic Subdural hematoma:**

- A. Its rare in the young and old.
- B. Its always associated with a history of head injury.
- C. Rarely produces symptoms.
- D. Its caused by arterial bleeding.
- E. Its commonly bilateral. XX

**5. Parkinson's disease:**

- A. Causes deafness.
- B. Usually presents in the third decade of life.
- C. It is caused by subdural hematoma.
- D. Produces Brady kinesia. XX

E. Very rarely shows clinical features of rigidity and tremor.

**7. A 70 years old man with a history of a remote myocardial infarction is found at autopsy to have a 4 cm diameter area of softening in the region of the left middle cerebral artery distribution. This is most consistent with:**

- A. Vasculitis.
- B. Arterial Embolization. XX
- C. Venous thrombosis.
- D. Hypertension.
- E. Mycotic aneurysm.

**8. True statement regarding intracranial Berry aneurysm include all of the following EXCEPT:**

- A. They are present at birth. XX
- B. Subarachnoid hemorrhage could result from rupture.
- C. They can be associated with dominant polycystic kidney.
- D. Rupture is probably not associated with hypertension.
- E. Intraparenchymal hemorrhage could result from rupture.

## PATHOLOGY

**15- In poliomyelitis, pathologic findings principally involve the:**

- A. Anterior horn cells of the spinal cord, **XXX**
- B. Cerebellum,
- C. Thalamus,
- D. Muscle fibers of leg,
- E. Caudate nucleus.

**16- In subacute combined degeneration all the following are TRUE, EXCEPT:**

- A. Associated with pernicious anemia,
- B. Grey matter of spinal cord is rarely affected,
- C. Posterior funiculi and pyramidal tracts undergo degeneration,
- D. No improvement with folic acid treatment,
- E. Usually doesn't cause motor weakness or spasticity. **XXX**

**17- Which of the following is true regarding tabes dorsalis?**

- A. It is a manifestation of secondary syphilis,
- B. Patient has mainly cerebral lesion,
- C. Patient has mainly cerebellar lesion,
- D. Patient has mainly spinal cord lesion, **XXX**
- E. Patient has mainly upper motor lesion.

**18- Which of the following is an acquired demyelinating disease?**

- A. Krabbe disease,
- B. Leukodystrophy,
- C. Fatal familial insomnia,
- D. General paresis of the insane,
- E. Multiple sclerosis. **XXX**

## PATHOLOGY

**75. The most important histopathological indicator of CNS injury is?**

- A. Rosenthal fiber
- B. Colpura amyloacea
- C. Gliosis **XXXX**
- D. Granulation tissue
- E. Lafora bodies

**76. In Vasogenic brain edema, one of the following statements is TRUE?**

- A. Is a predominantly disease of white matter **XXXX**
- B. Is predominantly a disease of gray matter

- C. Is a disease of both white matter & gray matter
- D. Can be caused by water toxication
- E. Can be produced by non communicating hydrocephalus

**78. Which of the following laboratory tests is most likely useful in making diagnosis of adrenoleukodystrophy?**

- A. Serum hexosaminidase
- B. Serum long chain fatty acid level XXXX
- C. Serum sulphatase activity
- D. CSF oligoclonal band
- E. Serum beta galactosidase activity

**79. In brain abscess the CSF finding include all the following EXCEPT?**

- A. Low cells ,low sugar and low protein
- B. Rich cells, high sugar ,and high protein
- C. Low cells , high sugar and low protein
- D. Low cells high sugar and low protein
- E. Low cell ,normal sugar and high protein XXXX

**80. Subfalcin herniation due to expansion of cerebral hemisphere involve?**

- A. Cerebellar tonsils
- B. Cerebral tonsils
- C. Medial temporal lobe
- D. Cingulate gyrus XXXX
- E. Cerebellum

**76. An acute multiple sclerosis plaque is distinguishable from chronic plaque by which of the following criteria?**

- A. A well circumscribed border
- B. The presence of large numbers of macrophage and enlarged astrocytes
- C. Lymphocytes in the lesion and perivascular accumulation
- D. Complete loss of neurons
- E. Periventricular location

**77. Red neuron is best describe which of the following statements ?**

- A. Intra neuronal deposit
- B. Atrophoid neurone
- C. Acutely injured cell
- D. Gilal cell
- E. Is an indicator of viral infection

**78. Regarding multiple sclerosis, all the following are true, EXCEPT?**

- A. Show patchy demyelination irregularly distributed in brain & spinal cord
- B. usually start in early adulthood
- C. May show increase in protein of the CSF with oligoclonal pattern
- D. Often present as an acute unilateral optic neuritis

E. usually follows a regular progressive course

**80. The primary lesion in Guillain - Barre syndrome is:**

- A. Plaque
- B. Segmental demyelination
- C. Axonal degeneration
- D. Onion bulb formation
- E. Myelin sheath damage

## Neuro II Pathology Mk 007 (8)

### 1. The cerebrospinal fluid in acute pyogenic meningitis:

- A. Its usually clear.
- B. Usually has an increased glucose level.
- C. Usually has a decreased protein level.
- D. Contain No or Few numbers of neutrophil polymorphs.
- E. May show Bacteria on Gram staining. XX

### 2. Regarding multiple sclerosis all the following are true EXCEPT:

- A. Shows patchy demyelization irregularly distributed in the brain and spinal cord.
- B. Usually starts in early adulthood.
- C. Usually follows a regular, progressive course. XX
- D. May show an increase in protein concentration of the cerebrospinal fluid.
- E. Often presents as an acute unilateral optic neuritis.

### 3. Senile dementia of Alzheimer's type:

- A. Its commoner in males than in females.
- B. Shows reduced numbers of argyrophilic players when examined microscopically.
- C. Often shows primary hydrocephalus.
- D. Usually shows widespread cortical atrophy. XX
- E. Is caused by multiple cerebral infarcts.

### 4. Chronic Subdural hematoma:

- A. Its rare in the young and old.
- B. Its always associated with a history of head injury.
- C. Rarely produces symptoms.
- D. Its caused by arterial bleeding.
- E. Its commonly bilateral. XX

### 5. Parkinson's disease:

- A. Causes deafness.
- B. Usually presents in the third decade of life.
- C. It is caused by subdural hematoma.
- D. Produces Brady kinesia. XX
- E. Very rarely shows clinical features of rigidity and tremor.

### 6. In chronic tuberculous meningitis, the cerebrospinal fluid:

- A. Contains markedly increased numbers of neutrophil polymorphs.
- B. May show acid-fast bacilli on Ziehl-Neelsen staining. XX
- C. Usually appears blood stained.
- D. Usually has increased levels of glucose.
- E. Is usually at a decreased pressure.

7. A 70 years old man with a history of a remote myocardial infarction is found at autopsy to have a 4 cm diameter area of softening in the region of the left middle cerebral artery distribution. This is most consistent with:
- A. Vasculitis.
  - B. Arterial Embolization. XX
  - C. Venous thrombosis.
  - D. Hypertension.
  - E. Mycotic aneurysm.
8. True statement regarding intracranial Berry aneurysm include all of the following **EXCEPT**:
- A. They are present at birth. XX
  - B. Subarachnoid hemorrhage could result from rupture.
  - C. They can be associated with dominant polycystic kidney.
  - D. Rupture is probably not associated with hypertension.
  - E. Intraparenchymal hemorrhage could result from rupture.

**12. The Cerebrospinal fluid in chronic tuberculous meningitis:**

- A. Contains markedly increased numbers of neutrophils
- B. Usually has an increased level of glucose
- C. Usually appears blood-stained
- D. May show acid-fast bacilli on Ziehl-Neelsen staining **XXX**
- E. It is usually at a decreased pressure

**20. All the following are true in primary intracerebral hemorrhage, EXCEPT:**

- A. Occurs most commonly in the region of the basal ganglia.
- B. Occurs from micro-aneurysms on small perforating arteries.
- C. It is often caused by ruptured Berry aneurysm **XXX**
- D. It is associated with hypertension
- E. Causes senile dementia.

**21. Chronic subdural hematoma is:**

- A. Common in the young and old **XXX**
- B. Always associated with a history of head injury
- C. Rarely produces symptoms
- D. Caused by arterial bleeding.
- E. Rarely bilateral.

**22. All the following are true in meningiomas, EXCEPT:**

- A. The second commonest type of primary intracranial tumors after gliomas
- B. Are thought to arise from the arachnoid granulations
- C. Are usually malignant **XXX**
- D. Microscopically, often show psammoma bodies and whorl formation
- E. Are usually benign.

**24. Regarding astrocytomas:**

- A. If well-differentiated, are often called glioblastomas
- B. On microscopic examination, usually have well-circumscribed and well-demarcated borders
- C. Arise from neurons.
- D. They are the commonest type of glioma **XXX**
- E. Rarely show cystic changes

**25. Raised intracranial pressure may produce all the following, EXCEPT:**

- A. Diminished consciousness
- B. Erosion of the posterior clinoid processes
- C. Papilledema
- D. Lowered systolic blood pressure with rapid pulse **XXX**
- E. Causes tonsillar herniation.

- A. Cerebellar tonsillar herniation

**1. In poliomyelitis the pathologic findings principally involves the:**

- f. anterior horn cells of the spinal cord X
- g. cerebellum
- h. thalamus
- i. muscle fibres of leg
- j. caudate nucleus

**2. regarding subacute combined degeneration all the following are true EXCEPT:**

- f. is associated with pernicious anemia
- g. the grey matter of spinal cord is rarely affected
- h. the posterior funiculi and pyramidal tracts undergo degeneration
- i. no improvement with folic acid treatment
- j. usually doesn't cause motor weakness or spasticity X

**3. Which of the following is a acquired demyelinating disease:**

- f. Krabbe disease
- g. Leukodystrophy
- h. Fatal familial insomnia
- i. General paresis of the insane
- j. Multiple sclerosis X

**4. CSF examination in bacterial meningitis would reveal:**

- a. many neutrophils and high protein content X
- b. many lymphocytes and high protein content
- c. many neutrophils and low protein content
- d. presence of oligoclonal band
- e. presence of inclusion body

**5. Regarding Prion disease theory which of the following is a normal cellular protein**

:

- a. PrP<sup>c</sup> X
- b. PrP<sup>sc</sup>
- c. PrP<sup>res</sup>
- d. PrP<sup>res</sup> and PrP<sup>sc</sup>
- e. PrP<sup>mut</sup>

# Physio

## 1. The cornea .

- A. Obtains its nutrient supply from the aqueous fluid only .
- B. Its dioptric power changes during accommodation than during rest .
- C. Is a component of the middle coat of the eye .
- D. The refractive power of the cornea is smaller than that of the lens .
- E. Its collagen fibers are non uniform in size and parallel in direction

## 2. Concerning aqueous humour . Which of the following statements is WRONG ?

- A. In some cases of glaucoma , its rate of formation is higher that its rate of drainage .
- B. Carbonic anhydrase inhibitors does not affect its rate of formation .
- C. It is formed only by the ciliary processes .
- D. It circulates from the posterior chamber through the pupil to the anterior chamber .
- E. Its rate of secretion undergoes some diurnal variations .

## 3. Concerning binocular vision . The following are true statements . EXCEPT .

- A. It is due to the ability of the brain to fuse the two figures perceived to be felt as one figure by the cerebral cortex .
- B. Estimation of distance is not accurate .
- C. The visual field is larger than the monocular field .
- D. Depth perception is present in both monocular & binocular vision .
- E. Vision is stereoscopic .

## 4. Concerning presbyopia .

- A. Is due to an increase in the dioptric power of the eye lens in old age .
- B. The near point does not change with age .
- C. Parallel rays are focused in front of the retina .
- D. The object image is focused without accommodation in front of the retina .
- E. It can be corrected partially by a convex lens for reading .

## 5. Which of the following statements is TRUE ?

- A. The basilar membrane is composed of 20 to 30 thousand of basilar fibers equal in length & thickness .
- B. A person with a perforated ear drum cannot hear .
- C. The inner hair cells of the organ of Corti are responsible for the transduction of sound energy .

- D. Destruction of the auditory association area leads to loss of sound discrimination as regards tone & locality .
- E. The only functions of the external ear are collection of sounds & transmission of vibrations to the middle ear .

**6. Concerning myopia .**

- A. The near point is farther than normal from the eye .
- B. An object at the usual near point is focused on the retina without accommodation .
- C. The eye dimensions tend to be shorter than average for normal persons .
- D. The condition improves by aging .
- E. The condition can be corrected by a convex lens .

**7. The human retina .**

- A. Its periphery does not perceive colour sensation .
- B. Rod : bipolar : ganglion cell is 1 : 1 : 1 in the fovea .
- C. The fovea is very rich in rods .
- D. Its periphery receives its nutrient supply only from the choroid .
- E. The cones perceive the details and colours .

**8. The following are true statements about taste sensation . EXCEPT .**

- A. Is perceived in the area of the tongue within the postcentral gyrus .
- B. The receptors for taste are a type of external chemoreceptors .
- C. Taste receptors are of five main primary types .
- D. Bitter taste receptors stimulation produce IP3 and responds by hyperpolarisation .
- E. Sour taste receptors are stimulated by closure of  $K^+$  channels that lead to its depolarization

**9. Concerning the middle ear .**

- A. The middle ear cavity content of air is highly variable .
- B. Impedance matching is the only function of the middle ear .
- C. The Eustachian tube equalizes the pressure on both sides of the oval window .
- D. The area of the tympanic membrane to the area of the foot plate of stapes is 1.3 times .
- E. It allows the easy movement of the round window and basilar membrane in the cochlea .

**10. The following are true statements about the H wave record . EXCEPT**

- A. It is an electromyographic record .
- B. It results from stimulation of a sensory nerve .

- C. On maximal stimulation it is preceded by an M wave .
- D. It is a monosynaptic spinal reflex response .
- E. An H wave is an H reflex

**11. Concerning the autonomic nervous system. Which statement is WRONG ?**

- A. Paralytic ileus is due to a sympathetic imbalance .
- B. The vasodilator function of all body vessels is a sympathetic function .
- C. Beta 1 adrenergic receptor stimulation leads to an intracellular increase in cAMP .
- D. Acetyl choline released from all nerve fibers originating from the CNS are nicotinic in action
- E. In cases of rest and digest the ANS main subdivision that works is the parasympathetic .

**12. Concerning the body equilibrium .**

- A. Changing the head position over the body does not lead to muscle tone changes in the muscles of the trunk or the neck .
- B. Impulses from the otolith organs change the muscle tone of body muscles during angular acceleration .
- C. Receptors in the utricle and saccule are chemoreceptors that are affected by changes in calcium carbonate crystals .
- D. Receptors in utricle and saccule are affected only by linear acceleration .
- E. At the start of rotation to the right , movement of fluid in the semicircular canals cause a feeling of rotation to the right .

**13. Sensory transduction .**

- A. Receptors for hearing & vision always respond to stimulation by receptor hyperpolarization
- B. Rate of impulses generated along nerve fibers is relative to the change in receptor potential
- C. Stimulation of sensory receptors for ordinary sensations leads to a decrease in  $\text{Na}^+$  permeability and its depolarization.
- D. Receptor respond to stimulation by complete depolarization .
- E. Impulses conducted along nerve fibers are variable in amplitude according to the degree of receptor potential changes .

**14. Concerning accommodation of the normal eye .**

- A. The lens becomes more flat during accommodation .
- B. Near point is the point at which a person can see clearly without accommodation .
- C. Far point is about 6 m .

- D. The range of accommodation is about 14 Δ .
- E. The power of the lens at the far point is 34 Δ .

**1. Concerning eye accommodation . Concerning eye accommodation .**

- A. The corneal dioptric power increases .
- B. The eyes converge .
- C. The dioptric power of the eye lens increases in power .
- D. The pupils constrict .
- E. The retina

**2. The refractive media of the eye .**

- A. The refractive media are the cornea, aqueous and lens .
- B. The refractive index of the lens center is higher that its periphery .
- C. The aqueous humour refractive index is higher than that of the lens .
- D. The aqueous humour of the anterior chamber possess the same characters to that of the posterior chamber .
- E. The posterior surface of the cornea does not possess optical properties .

**3. Concerning binocular vision .**

- A. The visual field of either eye does not contain visual defects .
- B. The common field perceived is nearly similar for the two eyes .
- C. The ability of the two retina to fuse the figures is highly accurate .
- D. The binocular field is not larger than the monocular field .
- E. An error of refraction in one eye is corrected spontaneously by the other eye .

**4. Concerning presbyopia .**

- A. It usually occurs after the age of 60 years .
- B. The near point changes gradually by age to be away from the eye.
- C. A previously emmetropic person feels a problem in seeing far objects and not near ones .
- D. The suitable correcting lens is a biconcave one .
- E. The error is due to a decline in the cerebral cortex abilities .

**5. The cornea .**

- A. Its dioptric power is stronger than that of the eye lens during rest .
- B. Its dioptric power changes during accommodation than during rest .
- C. Its collagen fibers become irregular by aging .
- D. Is completely dehydrated to reach its optimal refractive power .
- E. Is a component of the middle coat of the eye .

**6. Concerning hypermetropia .**

- A. The near point is farther than normal from the eye .
- B. An object at the usual near point is focused on the retina without accommodation .
- C. The eye dimensions tend to be more than the average for normal persons .
- D. The condition is not affected by aging .
- E. The condition can be corrected by a concave lens .

**7. Concerning the autonomic nervous system. Which statement is WRONG ?**

- A. In cases of rest and digest the ANS main subdivision that works is the parasympathetic .
- B. The sympathetic subdivision works only "en mass" .
- C. The vasodilator function of pelvic blood vessels is a parasympathetic function .
- D. Beta 2 adrenergic receptor stimulation leads to an intracellular increase in cAMP .
- E. Acetyl choline released from all nerve fibers originating from the CNS are nicotinic in action

**8. Concerning the body equilibrium .**

- A. At the start of rotation to the right , movement of fluid in the semicircular canals cause a feeling of rotation to the left .
- B. During angular acceleration , impulses from the otolith organs are responsible for the changes in muscle tone of the body muscles .
- C. At the end of rotation to the right , movement of fluid in the semicircular canals cause a feeling of rotation to the left .
- D. The hair cells in the utricle and saccule are affected by changes in calcium carbonate crystals position and direction .
- E. Receptors in the cupola of the semicircular canals are affected only by linear acceleration .

**9. Concerning hearing .**

- A. The human ear is most sensitive to sound frequencies between 20 to 20 kHz .
- B. The Eustachian tube is open normally to the nasopharynx and closes during swallowing .
- C. The area of the tympanic membrane to the area of the foot plate of stapes is 1.3 times .
- D. Both : the foot plate of stapes and basilar membrane move freely on displacement of the ossicular system .
- E. Ascending tracts from the right ear are represented in the left cerebral cortex only .

**10. With regards to impulse conduction on a nerve trunk .**

- A. The thin fibers conduct at a velocity of about 2m/second .
- B. The distance between waves of the compound action potential depends on the distance between stimulating and recording electrodes .
- C. A compound action potential is the sum of all spike potentials , which are equal in amplitude and duration .
- D. A compound action potential is composed of multiple waves affected only by the thickness and myelination of the fibers in the trunk .
- E. The first wave of the compound action potential is produced by the slowest conducting nerve fibers .

**11. Sensory transduction .**

- A. A receptor for ordinary sensations responds to stimulation by hyperpolarization .
- B. Stimulation of sensory receptors for ordinary sensations responds by an increase in Na ion permeability of the receptor membrane .
- C. The rate of impulses generated along nerve fibers is reversibly proportional to the change in receptor potential
- D. Impulses conducted along nerve fibers are variable in amplitude according to the degree of receptor potential changes .
- E. Photoreceptors respond to light by depolarization .

**12. With regards to taste and smell sensations .**

- A. Taste receptors are of four main primary types .
- B. Odorous materials produce hyperpolarisation of the smell receptors .
- C. Taste is perceived in the area of the tongue within the precentral gyrus .
- D. Smell receptors are non adapting chemoreceptors .
- E. Smell is the only sensation that does not relay in the thalamus .

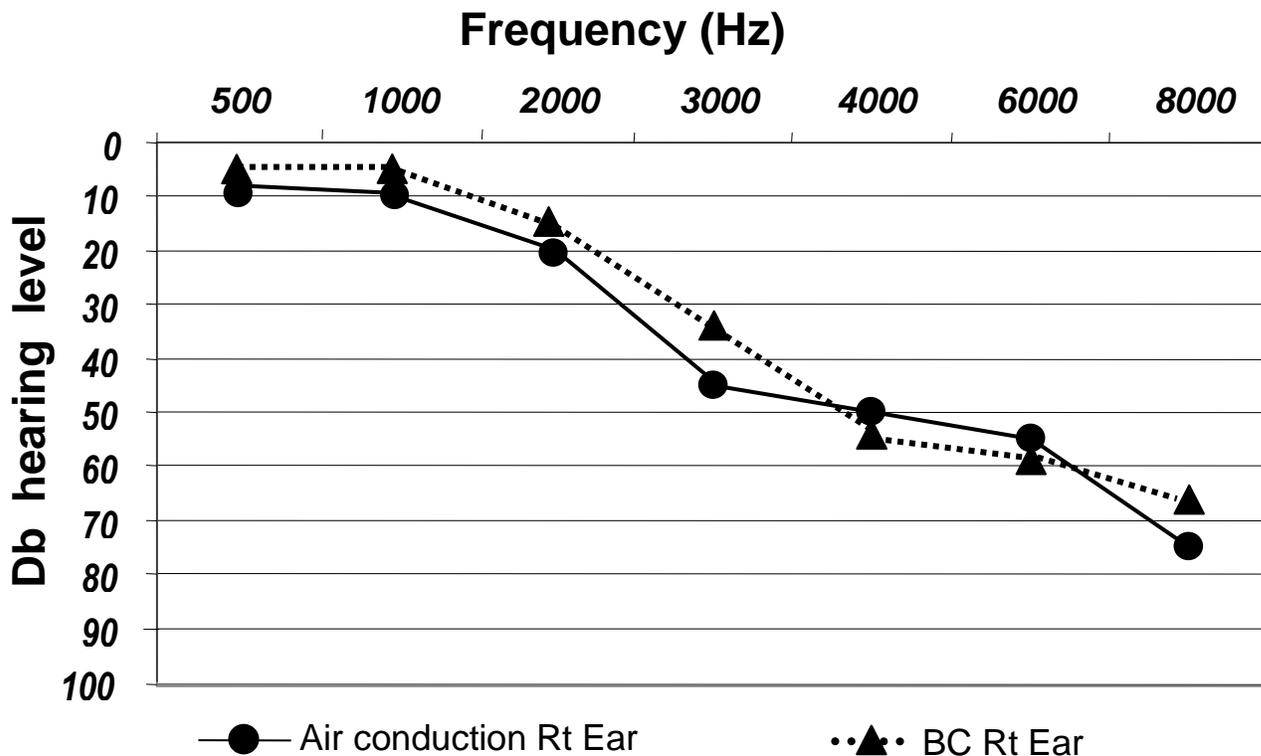
**13. The human retina .**

- A. In the optic disc the photoreceptors are very condensed .
- B. Its periphery can perceive colours .
- C. Rod : bipolar : ganglion cell is 1 : 1 : 1 in the fovea .
- D. The fovea is very rich in rods .
- E. Its periphery receives its nutrient supply only from the choroid .

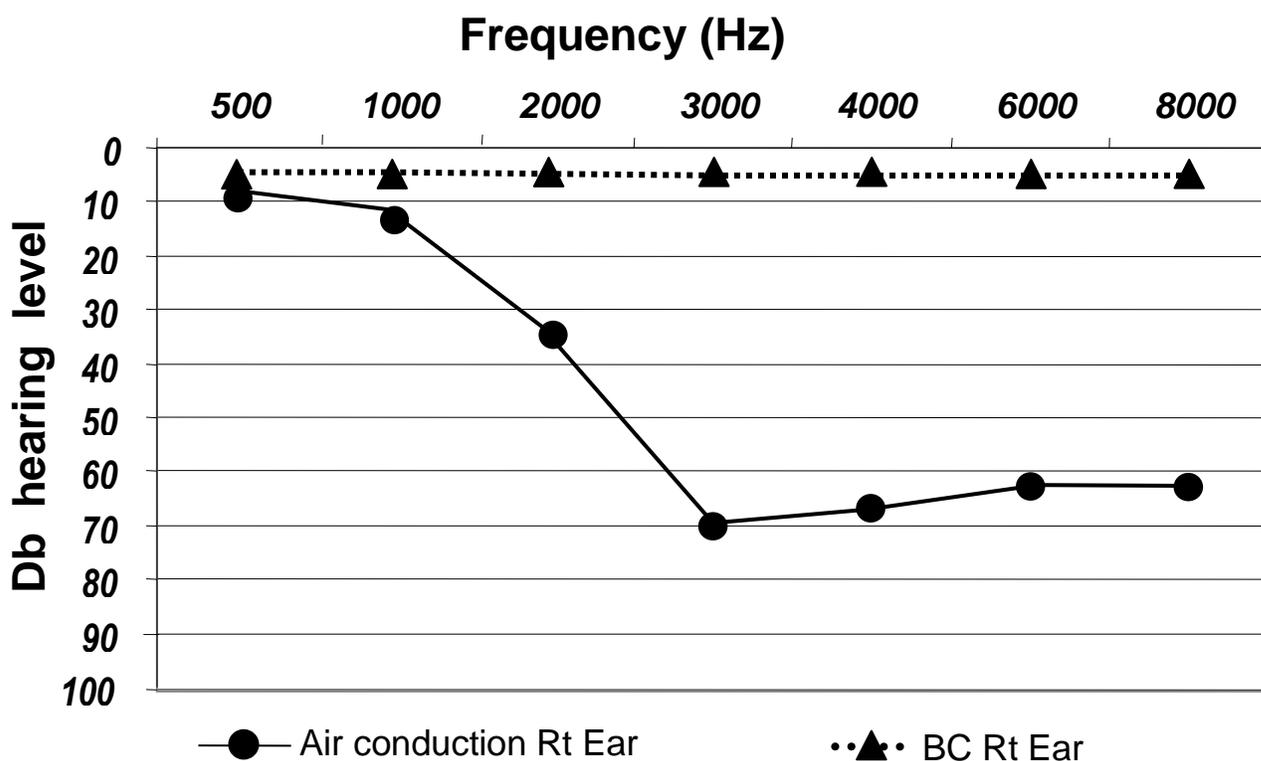
**14. Concerning aqueous humour .**

- A. In all cases of glaucoma , the rate of formation is decreased .
- B. Carbonic anhydrase inhibitors decrease the rate of secretion .
- C. It is formed by filtration from the retinal vessels .
- D. Its only function is to supply nutrients to the cornea and lens .
- E. Its rate of secretion is constant all through the day .

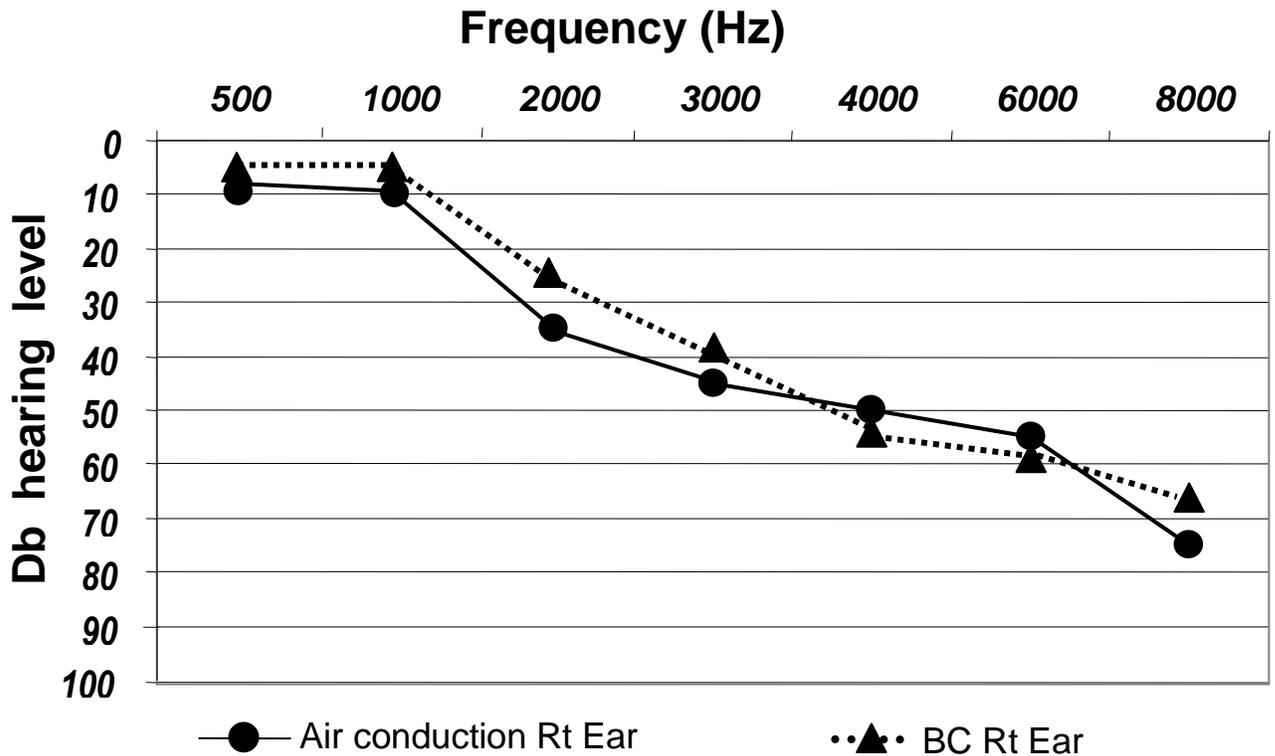
- a - Identify the type of deafness from the available audiogram .  
 b – The degree of hearing loss at 3000 Hz is :



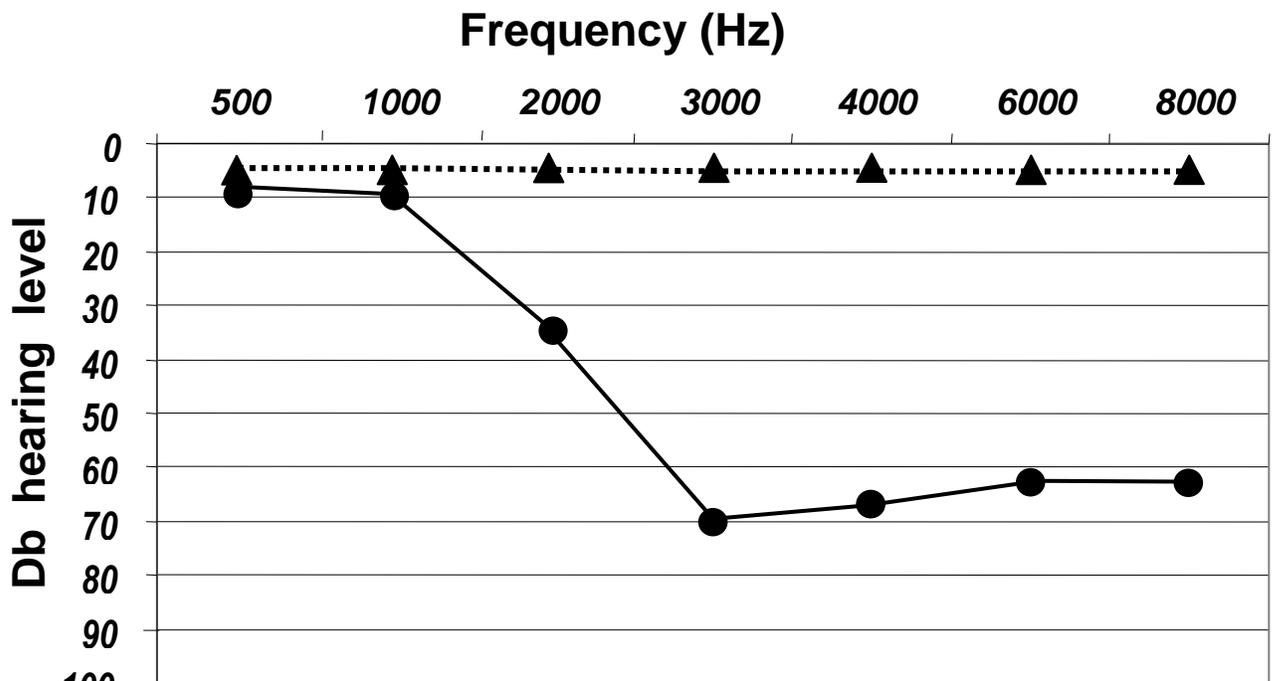
- a - Identify the type of deafness from the available audiogram .  
 b – The degree of hearing loss at 1000 Hz is :



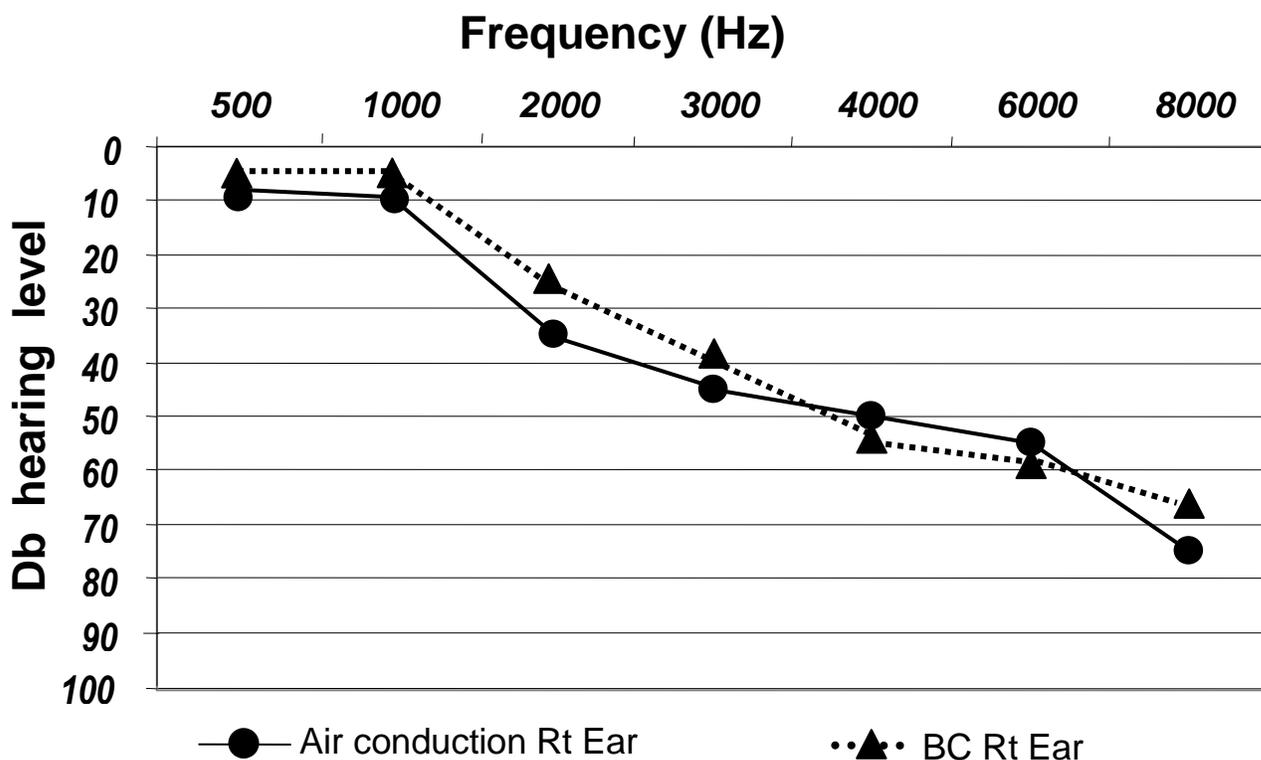
- a - Identify the type of deafness from the available audiogram .  
 b - The degree of hearing loss at 2000 Hz is :



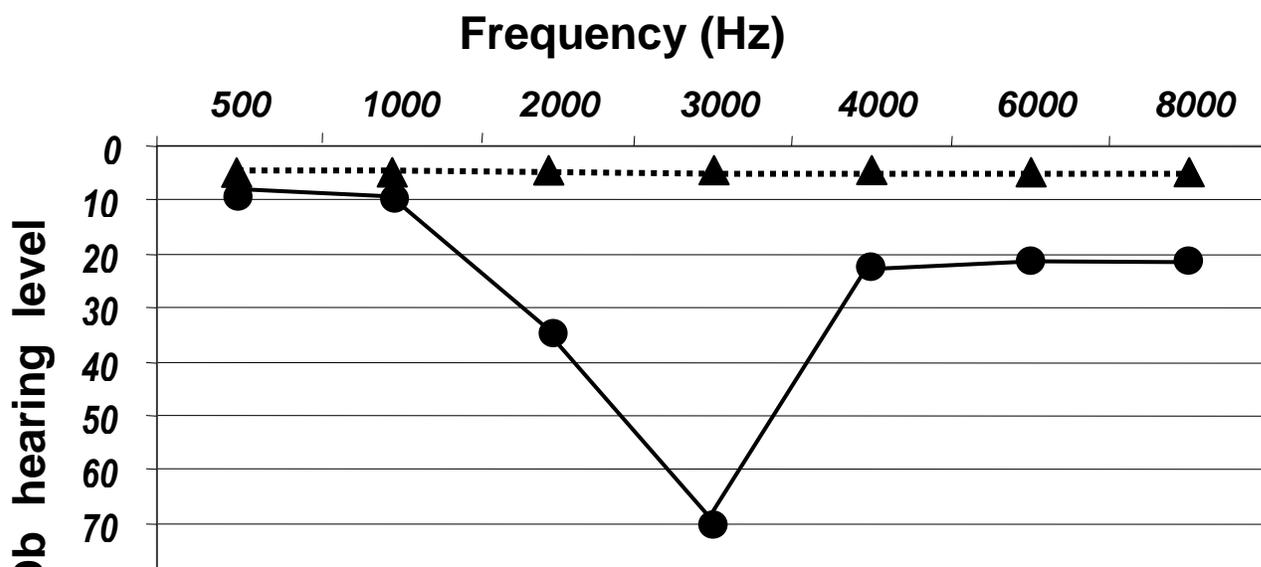
- a - Identify the type of deafness from the available audiogram .  
 b - The degree of hearing loss at 8000 Hz is :



- a - Identify the type of deafness from the available audiogram .  
 b - The degree of hearing loss at 4000 Hz is :



- a - Identify the type of deafness from the available audiogram .  
 b - The degree of hearing loss at 4000 Hz is :



**a - Identify the provided tool .**

**b – Identify its frequency .**

**a - Identify the provided tool .**

**b – Identify its frequency .**

**a – Identify the provided tool .**

**b – A low frequency of about 100 Hz is used for :**

**a - Identify the provided tool .**

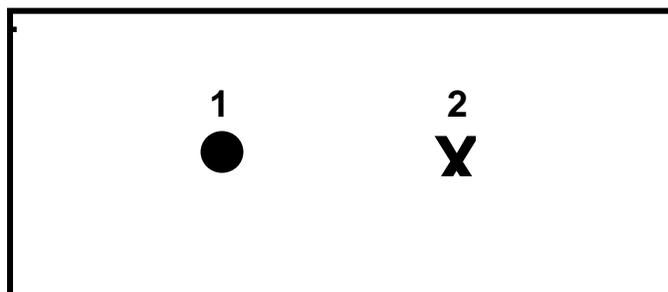
**b – It is a component of :**

a - Identify the provided tool .

b – It is used to test .

a - Identify the provided tool .

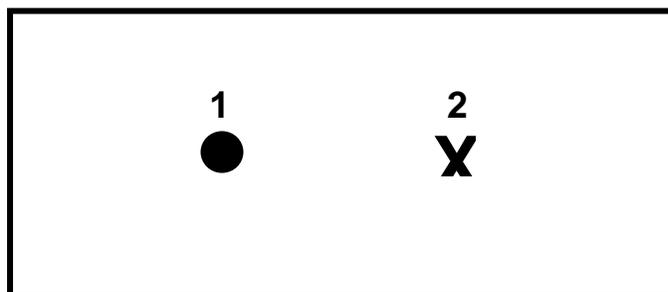
b – It is used to test .



If you fix your Rt eye on point 1 until point 2 is not seen .

a – Image of point 1 falls on :

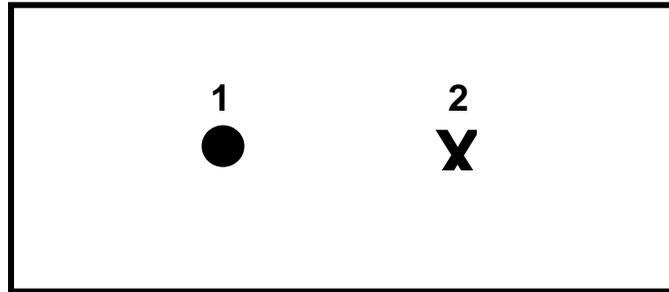
b – Image of point 2 falls on :



If you fix your Rt eye on point 1 until point 2 is not seen .

a – Image of point 1 falls on :

b – Image of point 2 falls on :



If you fix your Rt eye on point 1 until point 2 is not seen .  
 a – Image of point 1 falls on :  
 b – Image of point 2 falls on :

## anatomy

70- The following muscles are derived from the second pharyngeal arch, EXCEPT:

- F. Platysma,
- G. Auricular muscles,
- H. Stapedius,
- I. Anterior belly of digastric, XXX
- J. Posterior belly of digastric.

71- First arch abnormalities are mostly related to:

- F. Mesodermal tissue,
- G. Neural crest cells, XXX
- H. Pharyngeal pouches,
- I. Neural tube,
- J. Vascular accident.

72- Inner hair cells of Organ of Corti:

- K. Form 3 rows,
- L. They are of type I, XXX
- M. They are supported by outer pharyngeal cells,
- N. Innervated by scanty nerve endings,
- O. They receive no efferent fibers.

73- Endolymph:

- A. Fills bony labyrinth,

- B. Present in endolymphatic duct and sac only,
- C. Continuous with CSF,
- D. Fills all the membranous labyrinth, XXX
- E. Present in the middle ear cavity.

**74- Concerning the cornea, the following are true, EXCEPT:**

- K. The anterior epithelium is stratified squamous epithelium,
- L. Bowman's membrane supports the anterior epithelium,
- M. The cornea has rich innervations by sensory free nerve endings,
- N. The cornea is well vascularized, XXX
- O. The cornea is transparent.

**75- Macula lutea of the retina:**

- K. It is a point of low visual acuity,
- L. It has no cones,
- M. Located 3mm lateral to optic disc, XXX
- N. Is called the blind spot,
- O. Has rich blood supply.

**76- Concerning the pigment epithelium of the retina, the following are true, EXCEPT:**

- K. Has phagocytic activity,
- L. It is nutritive to the rods and cones,
- M. Absorbs extra light,
- N. Involved in retinol metabolism,
- O. Forms the innermost layer of retina. XXX

**77- Merkel cell disc ending, is located in:**

- K. Outer layer of epidermis,
- L. Deeper layer of epidermis, XXX
- M. Dermis,
- N. Between muscles,
- O. Musculo-tendinous junction.

**78- Cells of the sensory ganglia, characterize by the following, EXCEPT:**

- K. Large in size,
- L. Spherical,
- M. Arranged in groups,
- N. Multipolar, XXX
- O. Surrounded by well developed cellular capsule.

**79- In myelinated nerve fiber, nodes of Ranvier represent:**

- K. Locations for Schwanns cells nuclei,
- L. Increase in thickness of myelin sheath,
- M. Point of branching of Schwanns cells,
- N. Points of synaptic contacts,
- O. Discontinuations in myelin sheath. XXX

**1-The cervical investing fascia splits superiorly to enclose the:**

- A. Sternomastoid,
- B. Trapezius,
- C. Submandibular and sublingual glands,
- D. Parotid and submandibular glands, XXX**
- E. Superior belly of omohyoid.

**2 - Which structure is NOT considered as content of the carotid triangle?**

- A. Ansa cervicalis,
- B. Sympathetic chain,
- C. External carotid artery,
- D. Vagus nerve,
- E. Glossopharyngeal nerve. XXX**

**3-All are true regarding the genioglossus muscle, EXCEPT:**

- A. Arises from the superior genial tubercle,
- B. Inserts in the posterior 1/2 of the side of the tongue, XXX**
- C. Supplied by the hypoglossal nerve,
- D. Lies deep to the hyoglossus muscle,
- E. Protrudes the tongue if acted with that of the opposite side.

**4-The following statements are wrong, EXCEPT:**

- A. The thyrohyoid is supplied by the ansa cervicalis,
- B. The submandibular gland lies in the submental triangle,
- C. The superior longitudinal muscles of tongue increases its length,
- D. The transverse muscles of the tongue increases its height, XXX**
- E. The mylohyoid muscle is supplied by a branch of maxillary nerve

**5-The skin of the external auditory meatus is supplied by:**

- A. Auriculotemporal nerve,
- B. Auricular branch of vagus nerve,
- C. Great auricular nerve,
- D. A & B, XXX**
- E. B & C.

**6- All are TRUE regarding the facial nerve, EXCEPT**

- A. Attaches to groove between olive and pons,
- B. Formed of motor root and nerve intermedius,
- C. Enters the external auditory meatus, XXX**
- D. Leaves the skull through the stylomastoid foramen,
- E. Divides into terminal branches inside the parotid gland.

**7- All are TRUE regarding the musculocutaneous nerve, EXCEPT:**

- A. It is a branch of the medial cord, XXX**

- B. Pierces the coracobrachialis,
- C. Supplies the biceps,
- D. Supplies the brachialis,
- E. Supplies skin of lateral side of forearm.

**8- All are TRUE regarding the median nerve, EXCEPT:**

- A. Arises from the lateral and medial cords,
- B. Enters the forearm between 2 heads of flexor carpi ulnaris, XXX
- C. Enters the hand by passing deep to flexor retinaculum,
- D. Supplies the muscle of the thenar eminence,
- E. Its injury leads to ape hand.

**9- The following are branches of the lumbar plexus, EXCEPT:**

- A. Femoral nerve,
- B. Obturator nerve,
- C. Posterior coetaneous nerve of thigh, XXX
- D. Iliohypogastric nerve,
- E. Ilioinguinal nerve.

**10-The following statements are true, EXCEPT:**

- A. Sacral plexus; is formed by ventral rami of L4, 5, S 1,2,3,4,
- B. Sacral plexus; lies anterior to piriformis,
- C. Inferior gluteal nerve; leaves the pelvis through the greater sciatic notch,
- D. Pudendal nerve; enters the pelvis through the lesser sciatic notch,
- E. Posterior cutaneous nerve of thigh; enters the gluteal region above the piriformis. XXX

**11-The hypoglossal nerve contains NONE of the following, EXCEPT:**

- A. Parasympathetic efferent fibers from the superior salivatory nucleus,
- B. Parasympathetic efferent fibers from the inferior salivatory nucleus,
- C. Sensory afferents,
- D. Motor fibers to muscles of tongue except palatoglossus, XXX
- E. Afferents fibers carrying taste sensation from the tongue.

**12- Parasympathetic fibers in glossopharyngeal nerve arise from:**

- A. Lacrimary nucleus,
- B. Superior salivatory nucleus,
- C. Inferior salivatory nucleus, XXX
- D. Dorsal vagal nucleus,
- E. Nucleus solitarius.

**13-The glossopharyngeal nerve carries:**

- A. General sensation of posterior 1/3 of tongue,
- B. Taste sensation from the posterior 1/3 of tongue,
- C. Taste sensation from the vallate papillae,
- D. All the above, XXX

E. None of the above.

**14- Which cranial nerve attaches to medulla oblongata between pyramid and olive?**

- A. Facial nerve,
- B. Glossopharyngeal nerve,
- C. Vagus nerve,
- D. Accessory nerve,
- E. Hypoglossal nerve.

**XXX**

**35- Which is correct about sympathetic system?**

- A. Three preganglionic fascicles originate from the cervical cord,
- B. Most ganglia contain a predominance of bipolar cells,
- C. Adrenal cortex receives preganglionic fibers from celiac ganglion,
- D. Adrenal medulla receives lumbar postganglionic fibers,
- E. Male genital tract receives pelvic postganglionic fibers.

**XXX**

**36- Which is not a character of thoracic inlet syndrome?**

- A. Increase tear secretion,
- B. Pinpoint pupil,
- C. Ptosis,
- D. Enophthalmus,
- E. Hand's intrinsic muscle atrophy.

**XXX**

**37- Which doesn't apply for the mandibular nerve?**

- A. All its fibers originate from trigeminal ganglion,
- B. All its fibers leave through foramen ovale,
- C. Carries all sensory modalities from temporal region,
- D. Mediates the jaw reflex,
- E. Carries all sensory modalities from mandibular teeth and gum.

**XXX**

**38- Which is true about the optic nerve?**

- A. Develops as an outgrowth of the diencephalon,
- B. It is wrapped by Schwanns cells,
- C. Its fibers are of primary neurons on the path,
- D. Most fibers reaching the lateral geniculate body are crossed fibers,
- E. Cell bodies occupy pretectal nuclei.

**XXX**

**39- Lesions in various parts of visual pathways result in, EXCEPT:**

- A. Left optic nerve ..... Left homonymous hemianopia, **XXX**
- B. Optic chiasma ..... Bitemporal hemianopia,
- C. Left optic tract ..... Right homonymous hemianopia,
- D. Right optic radiation ... Left homonymous hemianopia,
- E. Left occipital cortex ..... Right homonymous hemianopia.

**40- Which is CORRECT about the otic ganglion?**

- A. Situated in infratemporal fossa, medial to mandibular nerve, XXX
- B. Its preganglionic fibers are from greater petrosal,
- C. Supplies all major salivary gland except the parotid,
- D. Supplies all minor salivary glands on dorsum of the tongue,
- E. Supplies minor salivary glands in soft palate.

**41- Which is WRONG about the scalp?**

- A. On either side bounded by temporal lines,
- B. Haematoma in its superficial fascia is hard,
- C. Coronal wounds involving its aponeurosis should be sutured,
- D. Posteriorly supplied by dorsal rami of cervical nerves,
- E. Anteriorly supplied by ventral rami. XXX

**42- The membranous gap separating fetal skull bones is called as:**

- A. Fontanelles, XXX
- B. Wormian bones,
- C. Sutures,
- D. Ostia,
- E. Apertures.

**43- The artery that has a landmark in front of mandibular angle is:**

- A. Facial XXX
- B. Lingual
- C. Maxillary
- D. Ascending pharyngeal
- E. Occipital

**44- The following muscles can be lateral deviators of eyeball, EXCEPT:**

- A. Lateral rectus,
- B. Levator palpebrae superioris, XXX
- C. Inferior oblique,
- D. Superior rectus,
- E. Inferior rectus.

**45- Segmental level for some important organs is, EXCEPT:**

- A. Head & Neck T 1-3,
- B. Heart T 1-5,
- C. Upper Limb T 2-6,
- D. Rectum & Bladder T 10-11, XXX
- E. Foregut T 7-9.

# Micro

67- The following diseases transmitted by ticks are associated with skin rash EXCEPT:

- A. Tularemia, XXX
- B. Lyme disease,
- C. Rocky mountain spotted fever,
- D. Endemic relapsing fever,

An HIV-positive patient asks you if you can tell him the chances of him progressing to symptomatic AIDS. Which one of the following tests would be most useful?

- a. CD4 lymphocyte count
- b. HIV antibody test
- c. HIV RT PCR**
- d. Neopterin
- e. HIV p24 antigen

10. Which one of the following statements best describes interferon's suspected mode of action in producing resistance to viral infection?

- a. It stimulates a cell-mediated immunity
- b. It stimulates humoral immunity
- c. Its direct antiviral action is related to the suppression of messenger RNA formation
- d. Its action is related to the synthesis of a protein that inhibits translation or transcription**
- e. It alters the permeability of the cell membrane so that viruses cannot enter the cell

57. Reverse transcriptase is an enzyme unique to the retroviruses. Which one of the following is a function of the enzyme reverse transcriptase?

- a. DNase activity
- b. RNA-dependent RNA polymerase activity
- c. RNA isomerase activity
- d. RNA-dependent DNA polymerase activity**
- e. Integration activity

60. Interferon, a protein that inhibits viral replication, is produced by cells in tissue culture when the cells are stimulated with which of the following?

- a. Botulinum toxin
- b. Synthetic polypeptides

**c. Viruses**

- d. Chlamydiae
- e. Gram-positive bacteria

☒ **61.** Which one of the following statements best describes the cytopathic effects of viruses on host cells?

**a. Usually morphological in nature**

- b. Often associated with changes in mitochondrial membranes
- c. Pathognomonic for an infecting virus
- d. Rarely fatal to the host cell
- e. Can only be seen with an electron microscope

☒ **116.** A patient with a peptic ulcer was admitted to the hospital and a gastric biopsy was performed. The tissue was cultured on chocolate agar incubated in a microaerophilic environment at 37°C for 5 to 7 days. At 5 days of incubation, colonies appeared on the plate and were curved, Gram-negative rods, oxidase-positive. The most likely identity of this organism is

- a. *Campylobacter jejuni*
- b. *Vibrio parahaemolyticus*
- c. *Haemophilus influenzae*
- d. *Helicobacter pylori***
- e. *Campylobacter fetus*

**126.** The class of antibiotics known as the quinolones are bactericidal. Their mode of action on growing bacteria is thought to be

**a. Inhibition of DNA gyrase**

- b. Inactivation of penicillin-binding protein II
- c. Inhibition of  $\beta$ -lactamase
- d. Prevention of the cross-linking of glycine
- e. Inhibition of reverse transcriptase

☒ **138.** Assuming that the average achievable serum level of gentamicin is 6 to 8 mcg/mL, which of the following bacteria is susceptible to gentamicin?

- a. *E. coli* with a minimal inhibitory concentration (MIC) of 10 mcg/mL
- b. *E. coli* with an MIC of 12 mcg/mL

**c. *Klebsiella* with an MIC of 0.25 mcg/mL**

- d. *Klebsiella* with an MIC of 6.0 mcg/mL
- e. *Klebsiella* with an MIC of 20 mcg/mL

☒ **139.** A child comes to an emergency room because of an infected dog bite. The wound is found to contain small Gram-negative rods. The most likely cause of infection is

- a. *E. coli*
- b. *H. influenzae*
- c. *Pasteurella multocida***
- d. *Brucella canis*
- e. *Klebsiella rhinoscleromatis*

☒ **148.** *S. aureus* causes a wide variety of infections, ranging from wound

infection to pneumonia. Treatment of *S. aureus* infection with penicillin is often complicated by the

- a. Inability of penicillin to penetrate the membrane of *S. aureus*
- b. Production of penicillinase by *S. aureus***
- c. Production of penicillin acetylase by *S. aureus*
- d. Lack of penicillin binding sites on *S. aureus*
- e. Allergic reaction caused by staphylococcal protein

**172.** The most effective noninvasive test for the diagnosis of *Helicobacter* associated gastric ulcers is

- a. Detection of *H. pylori* antigen in stool**
- b. Growth of *H. pylori* from a stomach biopsy
- c. Growth of *H. pylori* in the stool
- d. IgM antibodies to *H. pylori*
- e. Culture of stomach contents for *H. pylori*

**188.** A patient with symptoms of urinary tract infection had a culture taken, which grew  $5 \cdot 10^3$  *E. coli*. The laboratory reported it as “insignificant.” The most clinically appropriate action is

- a. Do no further clinical workup
- b. Suggest to the laboratory that low colony counts may reflect infection**
- c. Determine if fluorescent microscopy is available for the diagnosis of actinomycosis
- d. Consider vancomycin as an alternative drug
- e. Suggest a repeat antibiotic susceptibility test

**1. All the following statements are true of prions EXCEPT:**

- A. good prions normally present in animal and human nerve cells
- B. are readily inactivated by hypochlorite
- C. are protein--containing particles
- D. are highly immunogenic XXXXX
- E. PrPSc, has beta sheet content renders the protein extremely stable and virtually indestructible.

**2. Scrapie and kuru possesses all of the following characteristics EXCEPT:**

- A. A histologic picture of spongiform encephalopathy.
- B. Transmissibility to animal's associated with a long incubation period
- C. Slowly progressive deterioration of brain function.
- D. Prominent intranuclear inclusions in oligodendrocytes XXX
- E. Caused by prions

**3. All the following statements are true EXCEPT**

- A. Dengue virus infection result from bites by Aedes mosquitoes
- B. Pigs act as the reservoir for dengue virus XXXXX
- C. Yellow fever may be prevented by vaccination
- D. Yellow fever virus is a flavivirus
- E. dengue fever may be associated with haemorrhagic manifestations and renal involvement

**4. Togaviruses and Flaviviruses are characterized by all of the following EXCEPT:**

- A- They possess a lipid containing envelope.
- B- They have a genome of single-stranded RNA.

- C- They include many arboviruses  
 D- The principal method of transmission between human is by droplet infection XXXX  
 E- Multiply in both the vertebrate host and the bloodsucking vector.
- 5. All the following are true for rabies EXCEPT**  
 A- it has short incubation period XXXX  
 B- It can be diagnosed by Negri bodies  
 C- It can be treated by successful vaccine  
 D- It is also known as hydrophobia  
 E- Patients have excessive salivation
- 6. ONE of the following is WRONG about rabies virus:**  
 A- The virus has a single antigenic type ( serotype)  
 B- The antigenicity of virus resides in the envelope glycoprotein spikes,  
 C- Treatment by antiviral drug required long time. XXX  
 D- After the bite, the rabid animal died within 10 days with symptoms of rabies  
 E- In rabies a viremic phase precedes the encephalitis.
- 7. All the following are true about leprosy EXCEPT:**  
 A. it is caused by an acid fast bacteria  
 B. tuberculoid leprosy occurs in patients with poor cellular immunity XXX  
 C. more bacilli are found in the skin of patients with lepromatous leprosy than tuberculoid leprosy.  
 D. granuloma is a feature of tuberculoid leprosy  
 E. treatment with Dapsone is given for at least 2 years or until the lesions are free of organisms
- 8. Regarding tularemia , all the following are correct EXCEPT:**  
 A. Many routes of human exposure are known to exist  
 B. Symptoms are not related to skin manifestations only  
 C. Person to person transmission cannot occur  
 D. ulceration occur in majority of cases XXX  
 E. Regional lymph nodes are enlarged & painful
- 9. Tetanus is completely a preventable disease through : all the following EXCEPT**  
 A. Active immunization of infants with tetanus toxoid  
 B. Active immunization of risky person  
 C. Booster dose of toxoid every ten years  
 D. Passive immunization to wounded persons  
 E. Passive immunization to pregnant women XXX
- 10. Brucellosis : all the following are correct EXCEPT :**  
 A. It is presented by repeated febrile illness  
 B. B. abortus is present mainly in vaginal secretion & mammary gland of infected cows  
 C. It is intracellular organism of RE C  
 D. B. melitensis & suis are transmitted through drinking unpasteurized milk XXX  
 E. Combined therapy of tetracycline & streptomycin are recommended for its treatment.

**11. Which one is INCORRECT regarding lyme disease ?**

- A. It is spirochetal disease transmitted by nymphal stage of ticks
- B. It can affect skin, joints, heart & nervous system
- C. Its diagnosis is based on clinical signs of illness & detection of antibodies
- D. Non-pruritic rash all over the body XXX
- E. It is treated with antibiotics

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- J. It is treated with antibiotics

## اسئلة متفرقة

1. **Diazepam: Which of the following is false?**
  - A. Is metabolized in liver and has a short-acting hepatic metabolite **xx**
  - B. Has no significant effect on REM sleep but shortens slow-wave sleep
  - C. Effective in terminating acute dystonias caused by phenothiazines
  - D. Can cause respiratory depression if given i.v. in large therapeutic doses
  - E. Is quickly absorbed from intestine, but absorption is slow after i.m. injection
  
2. **The following are useful for partial epilepsy, EXCEPT:**
  - A. Lamotrigene
  - B. Valproate
  - C. Primidone
  - D. Ethosuximide **xx**
  - E. Carbamazepine
  
3. **The following are adverse effects of phenytoin, EXCEPT:**
  - A. Cerebellar dysfunction in overdose
  - B. Sedation **xx**
  - C. Hypertrophy of gums
  - D. Impaired cognition and learning in children
  - E. Macrocytic anemia
  
4. **Fluoxetine: Which statement is true?**
  - A. Inhibits reuptake of serotonin and noradrenalin in CNS
  - B. Induces microsomal hepatic enzymes
  - C. Produces sedation and constipation as side effects
  - D. Is contra-indicated in treatment of phobic anxiety disorder
  - E. Is safer in overdose than tricyclic antidepressants **xx**
  
5. **The following may be adverse effects of lithium, EXCEPT:**
  - A. Leucopenia **xx**
  - B. Polyuria
  - C. Arrhythmia

- D. Tremor
- E. Hypothyroidism

6. One of the following is **NOT** a therapeutic use of haloperidol:

- A. Acute mania
- B. Motion sickness **xx**
- C. Sydenham chorea
- D. Chronic schizophrenia
- E. All the above are correct

7. Following drugs enhance efficacy of L-DOPA in Parkinsonism, **EXCEPT**:

- B. Selegiline
- C. Amantadine
- D. Benzhexole
- E. Carbidopa **xx**
- F. Entacapone

8. In acute alcoholic intoxication: Which of the following is false?

- A. There is disinhibition with impaired judgement and skills
- B. Vomiting occurs due to gastric irritation
- C. Disulfiram is useful in management **xx**
- D. There is depression of myocardial function
- E. Hypoglycemia occurs due to inhibition of hepatic gluconeogenesis

9. Tricyclic anti-depressants: Which of the following is false?

- A. Amitriptyline has sedative and anti-muscarinic side effects
- B. Useful in treatment of neuropathic pain and in migraine
- C. Increase intra-neuronal noradrenalin stores & noradrenalin release in limbic system **xx**
- D. Overdose can cause cardiac arrhythmias, convulsions, coma, and respiratory depression,
- E. Clomipramine is useful in treatment of obsessive compulsive disorders

10. Which of the following cause EPSP?

- A. Block of axonal sodium channels
- B. Opening of chloride ion channels in post-synaptic neurons
- C. increase potassium permeability in post-synaptic neurons
- D. Block of calcium channels in axonal nerve endings
- E. None of the above **xx**

11. The following occur in chronic alcoholism, **EXCEPT**:

- A. High incidence of pneumonia

- B. Recurrent gastritis
- C. High incidence of gallstones **xx**
- D. Macrocytic anemia due to foliate deficiency
- E. Thiamine deficiency

**13. All the following indications of opioids & antagonists are true, EXCEPT:**

- A. Methadone: Replacement therapy in morphine addiction
- B. Naloxone: Opioid withdrawal syndrome **XXX**
- C. Morphine: Acute left ventricular failure
- D. Pentazocine: To relieve postoperative pain
- E. Pethidine: To relieve pain during labour

**14. All the following statements about morphine are true, EXCEPT:**

- A. Can safely be used in dying patients to relieve pain
- B. Can safely be used to relieve pain of biliary colic **XXX**
- C. Avoided in patients with head injury
- D. Avoided in patients with chronic obstructive airway disease
- E. Avoided in patients with liver disease

**15. All the following drugs produce physical dependence, EXCEPT:**

- A. Diazepam
- B. Khat **XXX**
- C. Lorazepam
- D. Heroin
- E. Pentazocine

**16. All the following statements about drugs of abuse are true, EXCEPT:**

- A. LSD produces panic reactions
- B. Benzodiazepines withdrawal includes epileptic fits
- C. Chronic glue sniffing produces neuropathy
- D. Long term use of cannabis produces oral cancer **XXX**
- E. Long term use of cocaine produces nasal mucosa ulceration

**17. All the following statements about halothane GA are true, EXCEPT:**

- A. Is highly soluble in blood **XXX**
- B. Is useful for maintenance of GA
- C. Produces commonly hypotension
- D. Produces sensitization of  $\beta_1$ -receptors in the heart
- E. Repeated administrations may produce hepatotoxicity

**18. All the following statements about nitrous oxide GA are true, EXCEPT:**

- A. Can safely be used with halothane
- B. Can safely be used with thiopentone
- C. Should be avoided in patients with myocardial infarction **XXX**
- D. Produces commonly diffusion hypoxia
- E. Produces commonly good analgesia

**19. All the following statements about IV anesthetics are true EXCEPT:**

- A. Ketamine produces light narcosis & deep analgesia
- B. Thiopentone produces deep narcosis & little analgesia
- C. Ketamine increases muscle tone
- D. Thiopentone produces commonly diffusion hypoxia **XXX**
- E. Ketamine can safely be used for short painful surgical procedures

**N.S. I Resit exam Pathology**

**20. The Cerebrospinal fluid in chronic tuberculous meningitis:**

- A. Contains markedly increased numbers of neutrophils
- B. Usually has an increased level of glucose
- C. Usually appears blood-stained
- D. May show acid-fast bacilli on Ziehl-Neelsen staining **XXX**
- E. It is usually at a decreased pressure

**20. All the following are true in primary intracerebral hemorrhage, EXCEPT:**

- A. Occurs most commonly in the region of the basal ganglia.
- B. Occurs from micro-aneurysms on small perforating arteries.
- C. It is often caused by ruptured Berry aneurysm **XXX**
- D. It is associated with hypertension
- E. Causes senile dementia.

**21. Chronic subdural hematoma is:**

- A. Common in the young and old **XXX**
- B. Always associated with a history of head injury
- C. Rarely produces symptoms
- D. Caused by arterial bleeding.
- E. Rarely bilateral.

**22. The cerebrospinal fluid in acute pyogenic meningitis:**

- A. Is usually clear.
- B. Usually has an increased glucose level.
- C. Usually has a decreased protein level.
- D. May show causative bacteria on gram staining. **XXX**
- E. Containing no or few numbers of neutrophils

**23. All the following are true in meningiomas, EXCEPT:**

- F. The second commonest type of primary intracranial tumors after gliomas
- G. Are thought to arise from the arachnoid granulations
- H. Are usually malignant **XXX**
- I. Microscopically, often show psammoma bodies and whorl formation
- J. Are usually benign.

**24. Regarding astrocytomas:**

- A. If well-differentiated, are often called glioblastomas

- B. On microscopic examination, usually have well-circumscribed and well-demarcated borders
- C. Arise from neurons.
- D. They are the commonest type of glioma **XXX**
- E. Rarely show cystic changes

**25. Raised intracranial pressure may produce all the following, EXCEPT:**

- A. Diminished consciousness
- B. Erosion of the posterior clinoid processes
- C. Papilledema
- D. Lowered systolic blood pressure with rapid pulse **XXX**
- E. Causes tonsillar herniation.

**26. Bacterial meningitis may result, sooner or later, in the following, EXCEPT:**

- B. Hydrocephalus
- C. Vascular thrombosis and infarction
- D. Abscess formation
- E. Subdural hematoma **XXX**
- F. Cerebellar tonsillar herniation

## Anatomy N.S. I

**27. The groove between the pyramid and olive gives origin to:**

- A. The vestibulocochlear nerve
- B. The glossopharyngeal nerve
- C. The Vagus nerve
- D. The cranial part of accessory nerve
- E. The hypoglossal nerve **XXX**

**28. The vagus nerve contains the following fibers EXCEPT:**

- A. Parasympathetic fibers from dorsal vagal nucleus
- B. Motor fibers from nucleus ambiguus
- C. Gustatory fibers end in nucleus solitaries
- D. Sensory fibers end in spinal nucleus of trigeminal nerve
- E. preganglionic fibers from inferior salivatory nucleus **XXX**

**29. The posterior surface of medulla oblongata has the following features EXCEPT:**

- A. A posterior median sulcus
- B. Upper 1/2 forms the roof of the 4<sup>th</sup> ventricle **XXX**
- C. Upper 1/2 contains vagal trigone on both sides of median sulcus
- D. Upper 1/2 contains hypoglossal and vestibular tribunes
- E. Lower 1/2 has gracile and cuneate tubercles

**30. The following nerve arises from the dorsum of mid brain:**

- A. The oculomotor nerve
- B. The trochlear nerve **XXX**

- C. The trigeminal nerve
- D. The abducent nerve
- E. The facial nerve

**31. Regarding the premotor area, one statement is false:**

- A. It occupies the posterior part of superior, middle and inferior frontal gyri
- B. Responsible for planning the design of voluntary movements
- C. Responsible for adjustment of posture essential for performance of movements
- D. Its lesion leads to retardation in performance of skeletal movements
- E. It is supplied by the anterior cerebral artery XXX

**32. One of the following is a commissural fiber:**

- A. A. The corpus callosum XXXX
- B. The internal capsule
- C. The arcuate fasciculus
- D. The inferior longitudinal fasciculus
- E. The anterior thalamic radiation

**33. The posterior limb of internal capsule is supplied by:**

- A. Anterior choroidal artery
- B. Posterior communicating artery
- C. Middle cerebral artery
- D. All the above XXX
- E. None of the above

**34. The genu of the internal capsule contains:**

- A. The corticonuclear tract (Corticobulbar tract) XXX
- B. The corticospinal tract
- C. The anterior thalamic radiation
- D. The posterior thalamic radiation
- E. The superior thalamic radiation

**35. The floor of the 3<sup>rd</sup> ventricle formed by the following except**

- A. Optic chiasma
- B. Infundibulum and tuber cinerium
- C. Mamillary body
- D. Anterior perforated substance XXX
- E. Tegmentum

**36. The falx cerebri**

- A. It is a dural fold; crescentic in shape
- B. It lies in the median longitudinal fissure of brain
- C. Its lower border contains the transverse sinus XXX

- D. Its anterior end attached to crista galli
- E. Its posterior end blends with the tentorial cerebelli

**37. The anterior cerebral artery supplies the following except**

- A. Anterior parts of caudate and lentiform nuclei
- B. Medial 1/2 of orbital part of inferior surface of cerebral hemisphere
- C. Inferior part of anterior limb of internal capsule
- D. Superior part of posterior limb of internal capsule XXX
- E. Medial surface of cerebral hemisphere except temporal and occipital poles

**Physiology N.S. I**

1. **a patient with rigidity, which is the most likely site of injury to the central nervous system (CNS)?**
  - A. Posterior cerebellum
  - B. Vestibular apparatus
  - C. Cerebral cortex
  - D. Reticular formation
  - E. Basal ganglia XXX
  
2. **The inability to perform rapidly alternating movements, such as catching a fly, is associated with lesion of the:**
  - A. Premotor cortex
  - B. Motor cortex
  - C. Cerebellum XXX
  - D. Substantia nigra
  - E. Medulla
  
3. **Which of the following tactile receptor properties is related most to the detection of pressure?**
  - A. High sensitivity
  - B. Slow rate of adaptation XXX
  - C. Small receptive field
  - D. High conduction velocity
  - E. Complex encapsulation
  
4. **Which one of the following components of the motor control system is NOT inhibitory in its function?**
  - A. Striatum
  - B. Internal capsule
  - C. Substantia nigra
  - D. Medullary pyramids XXX
  - E. Subthalamic nucleus

**5. Lesions that produce complete inhibition of fear responses and loss of emotion can often be seen in lesions involving the:**

- A. Septal nuclei
- B. Olfactory lobes
- C. Amygdaloid nuclei **XXX**
- D. Thalamus
- E. Sensory cortex

**6. The capacity to display rage:**

- A. Is eliminated when the cerebral cortex is removed
- B. Is due to an imbalance of activity in large and small fibers
- C. Is not affected by removal of the hypothalamus
- D. Does not require any structure above the level of the hypothalamus **XXX**
- E. Is the major function of the autonomic nervous system

**7. The ability to remember small bits of information perfectly for seconds or minutes if undistracted, but inability to consolidate these into long-term storage is often seen after which of the following lesions?**

- A. Unilateral left frontal lobe
- B. Bilateral occipital lobe
- C. Bilateral frontal lobe
- D. Bilateral temporal lobe **XXX**
- E. Bilateral parietal lobe

**8. All the following can be applied to visceral pain EXCEPT:**

- A. It is always due to chemical irritation of tissues **XXX**
- B. Cannot be pin pointed
- C. Can be referred to the surface of the body
- D. Is usually transmitted by C fibers
- E. It is usually caused by stimulation of pain endings over a wide area

**9. Which of the following parts of the body has cortical motoneurons with the largest representation on the primary motor cortex?**

- A. Shoulder
- B. Ankle
- C. Fingers **XXX**
- D. Elbow
- E. Knee

**10. The primary motor cortex:**

- A. Receives no sensory input
- B. Is active in the adjustment of motor activity to current sensory input **XXX**
- C. Is not necessary for fine motor movement
- D. Gives rise to the extrapyramidal tract
- E. Is localized only in the frontal lobe

**11. The condition known as REM sleep:**

- A. That point at which the individual becomes aware and alert
- B. Characterized by slow, high-voltage regular EEG activity
- C. Referred to as paradoxical sleep **XXX**
- D. Related to EEG patterns seen in comatose patients
- E. Characterized by total lack of all muscular activity

**12. Damage to Wernicke's area in the dominant hemisphere, which is the area of intelligence, is likely to make a person unable to:**

- A. Speak coherently and reasonably
- B. Hear high-frequency sounds
- C. Observe the details of a nice scene
- D. Read certain words
- E. Determine the overall meaning of a sentence **XXX**

**13. Which is NOT true about the ventromedial hypothalamic nucleus?**

- A. It is one of the largest nuclei in the hypothalamus
- B. Lesions result in obesity
- C. Lesions result in rage behavior
- D. It is referred to as the hunger center **XXX**
- E. It contains glucose receptors

**14. The reticular activating system:**

- A. Has high specific input to all areas of the cerebral cortex
- B. Has no relation to the level of consciousness in the CNS
- C. Is somatotopically organized
- D. Receives input from both the spinal ascending tracts and the cerebral cortex **XXX**
- E. Is localized only in the medulla

**Neuro (1) Make-up 2006 Micro**

**1. A major biological advantage of the attenuated poliovirus vaccine relative to the inactivated vaccine is its:**

- A. Ability to immunize simultaneously against the major types of poliovirus.
- B. Ability to induce circulating antibodies of all isotypes.
- C. Greater safety.
- D. Induction of mucosal immunity. **XXX**
- E. Prevents the dissemination of poliovirus to the nervous system i.e. prevent paralytic poliomyelitis

**2. Aseptic meningitis may be caused by a variety of microbial agents. During the initial 24 hour of the course of aseptic meningitis an affected person's cerebrospinal fluid is characterized by:**

- A. Decrease protein content.
- B. Elevated glucose concentration.

- C. Lymphocytosis.  
 D. Polymorphonuclear leucocytosis XXXXX  
 E. Eosinophilia
3. **Listeria monocytogenes, which of the following is best describe the organisms:**
- A. Listeria are facultative intracellular pathogens XXX  
 B. Once infected, the immune system cannot destroy listeria.  
 C. Listeria cannot cultivate on artificial media.  
 D. It is non-motile gram-positive bacilli.  
 E. Schwann cells of the nerves are the principle target cells.
4. **The virulence factors of N. meningitidis responsible for or thought to facilitate adherence to the nasopharyngeal mucosa are:**
- A. Pili and IgA protease. XXXXX  
 B. Outer membrane proteins.  
 C. Capsules and lipopolysaccharides.  
 D. Exotoxins and enterotoxins.  
 E. Flagella and spores.
5. **A boy is diagnosed preliminary as amoebic meningitis, the next step done will be:**
- A. Continue current antibiotics  
 B. Start amphotercin-B  
 C. Send CSF for PCR for Naegleria  
 D. Start amphotercin-B both I.V& intrathecally XXX  
 E. Non of the above is appropriate
6. **Which one of the following permits rapid confirmation of fungal meningitis?**
- A. Detection of specific antibodies in CSF  
 B. Increase protein s level in CSF  
 C. Presence of RBCS in CSF  
 D. Latex agglutination for antigen XXX  
 E. White cell count is elevated
1. **Stimulation of muscarinic receptors produces all followings effects EXCEPT:**
- A. Reduction of heart rate  
 B. Reduction of blood pressure  
 C. Miosis  
 D. Increases intraocular pressure XX  
 E. Increases intestinal motility
2. **All followings are adverse effects of direct cholinomimetic agonists EXCEPT:**
- A. Bronchocodilatation XX  
 B. Impaired the eye accommodation to far vision  
 C. Hypotension  
 D. Abdominal colic  
 E. Increase exocrine gland secretion

3. All the followings are uses of indirect acting cholinomimetics **EXCEPT:**
- Donepezil to improve cognition function in Alzheimer's disease
  - Physostigmine to stimulate bowel and bladder function
  - Pyridostigmine to improve muscle weakness in myasthenia gravis
  - Neostigmine is useful in diagnosis of myasthenia gravis **XX**
  - Physostigmine is useful to treat glaucoma
4. All the followings are adverse effects of antimuscarinic drugs **EXCEPT:**
- Dry mouth
  - Bradycardia **XX**
  - Constipation
  - Hyperthermia
  - Mydriasis
5. Antimuscarinic drugs are useful in all followings conditions **EXCEPT:**
- Motion sickness
  - Bronchial asthma
  - Constipation **XX**
  - Intestinal colic
  - Hyperhidrosis
6. All the followings are anticholinergic antimuscarinic drugs **EXCEPT:**
- Hyoscine butylbromide
  - Ipratropium
  - Benzhexol
  - Pirenzepine
  - Phenothiazines **XX**
37. Which of the following about drugs & adverse effects is **FALSE?**
- Amphetamines produce psychosis on chronic use
  - Salbutamol produces hypokalemia when given parenterally
  - Dobutamine produces heart failure when given early after myocardial infarction **XXX**
  - Oxymetazoline produces nasal mucosal atrophy with prolonged use
  - Prazocin produces mild tachycardia
38. Which of the following statements about drugs is **FALSE?**
- Pseudoephedrine is useful as nasal mucosal decongestant

- B. Adrenaline should be avoided in hyperthyroidism
- C. Phenylephrine is useful as pressor agent during spinal anaesthesia
- D. Doxazocin should be avoided in benign prostatic hypertrophy **XXX**
- E. Phentolamine is useful in clonidine withdrawal hypertensive crisis

**39. Which of the following statements about beta-agonists is FALSE?**

- A. Salmeterol is useful in prevention of nocturnal asthmatic attacks
- B. Terbutaline is useful in treatment of acute asthmatic attacks
- C. Salbutamol is useful in prevention of premature labour
- D. Ritodrine is a uterine relaxant agent
- E. Isoprenaline is a useful vasodilator in heart failure **XXX**

**40. Which of the following statements about beta-blockers is FALSE?**

- A. Esmolol is useful in supraventricular tachycardia
- B. Pindolol should be avoided in angina pectoris patients with bradycardia **XXX**
- C. Atenolol is useful after acute myocardial infarction
- D. Metoprolol is useful in moderate heart failure with high sympathetic tone
- E. Timolol reduces aqueous humour production

**41. Which of the following statements about adrenaline is FALSE?**

- A. Enhances platelet aggregation
- B. Reduces high IOP in acute close angle glaucoma **XXX**
- C. Antagonizes physiologically actions of histamine in anaphylactic shock
- D. Reduces release of vasoactive substances from mast cells
- E. Is contraindicated in patients taking tricyclic anti-depressants

**42. Which of the following statements about drugs is FALSE?**

- A. Methyldopa inhibits sympathetic outflow from medulla
- B. Noradrenaline is a useful vasoconstrictor during local anaesthesia
- C. Ephedrine enhances neuromuscular transmission in myasthenia gravis
- D. Metyrosine inhibits synthesis of endogenous catecholamines
- E. Parenteral labetalol precipitates hypertensive crisis in susceptible patients **XXX**

**43. Which of the following statements about local anaesthesia is FALSE?**

- A. Tetracaine is an ester useful in spinal anaesthesia
- B. Bupivacaine is an amide useful in obstetric procedures
- C. Local infiltration of xylocaine in fingers & toes is safe
- D. Dissociation of LA is enhanced in inflamed tissues **XXX**
- E. Cocaine has vasoconstrictor effect

**Saed End Course Exam**

**10. All the following of cholinergic antagonists in the GIT are correct, EXCEPT:**

- K. Decrease salivation
- L. Decrease acid secretion
- M. Decrease motility

- N. Decrease intestinal transit time **XXX**
- O. Have anti-diarrhoeal and anti-spasmodic effects

**11. All the following statements about atropine are correct, EXCEPT:**

- K. Is considered as prototype for parasympatolytics
- L. Is a natural tertiary amine
- M. Has well absorption and wide distribution
- N. Is completely metabolized by the liver **XXX**
- O. Blocks all 3 subtypes of muscarinic receptors

**12. All the following adverse effects of direct cholinomimetic agents are correct, EXCEPT:**

- K. Excessive sweating and salivation
- L. Hypotension
- M. Constipation **XXX**
- N. Bronchospasm
- O. Impaired eye accommodation to far vision

**13. All the following about direct-acting cholinoreceptor agonists are correct, EXCEPT:**

- F. Bethanechol is used to treat post-labour urinary retention
- G. Bethanechol has longer duration of action than Ach
- H. Bethanechol has useful potent nicotinic stimulant effects **XXX**
- I. Carbachol is used topically in treatment of glaucoma
- J. Pilocarpine is a natural alkaloid resistant to cholinesterase enzymes

**14. All the following statements about neostigmine are correct, EXCEPT:**

- U. It is a reversible inhibitor of cholinesterase enzyme
- V. It can be given orally and subcutaneously
- W. It causes marked central effects like confusion **XXX**
- X. It is useful as an antidote to competitive NM-blocker agents (tubocurarine-like drugs)
- Y. Its is used in myasthenia gravis to improve muscle weakness

**The following structures considered as contents of the carotid triangle except**

- A. The ansa cervicalis nerve
- B. The sympathetic chain
- C. The facial artery
- D. The lingual artery
- E. The inferior thyroid artery XXXX

**The mylohyoid formed the floor of**

- A. The submental triangle alone
- B. The submental and muscular triangles

- C. The submental and digastric triangles XXXX
- D. The digastric triangle and muscular triangle
- E. The digastric triangle and carotid triangle

**Regarding the tongue, one statement is true**

- A. The right genioglossus protrudes the tongue and pushed it to the right side
- B. The transverse muscles of tongue decrease its height
- C. The foliate papillae present in sides and tip of tongue
- D. Taste sensation carried from its tip by chorda tympani nerve XXX
- E. Its pharyngeal part drained by submandibular lymph nodes

**The upper 1/3 of medial surface of the auricle is supplied by**

- A. The auriculotemporal nerve
- B. The lesser occipital nerve XXX
- C. The great auricular nerve
- D. The great occipital nerve
- E. The 3<sup>rd</sup> occipital nerve

**The posterior wall of tympanic cavity (middle ear) had the following structures except**

- A. The pyramid
- B. The promontory XXX
- C. The aditus ad antrum
- D. The stapedius
- E. The vertical part of facial canal

**Regarding the facial nerve, one statement is true**

- A. Its parasympathetic fibers arise from inferior salivatory nucleus
- B. It passes through the external acoustic meatus
- C. Its parasympathetic fibers pass in greater superficial petrosal nerve and chorda tympani nerve XXXX
- D. It enters parotid gland through its anteromedial surface
- E. Its motor fibers arises from nucleus ambiguus

**Regarding the cervical plexus, one statement is not true**

- A. The phrenic nerve supplies the diaphragm
- B. The phrenic nerve supplies the fibrous pericardium and mediastinal pleura
- C. Their muscular branches supply the longus coli and rectus capitis
- D. The ansa cervicalis supplies the thyrohyoid muscle XXX
- E. The supraclavicular nerve descends along posterior border of sternomastoid

**Regarding the hypoglossal nerve, all are not true except**

- A. It is attached to groove between inferior cerebellar peduncle and olive
- B. It leaves the skull through the jugular foramen
- C. In the neck, it crosses internal and external carotid arteries XXXX

- D. It passes deep to hyoglossus muscle
- E. It supplies all muscles of tongue except styloglossus

**Concerning the vagus nerve, all are true except**

- A. Its taste fibers end in nucleus solitarius
- B. The right one enters the thorax by crossing the subclavian artery
- C. Its superior laryngeal branch supplies the cricothyroid via its external branch
- D. Its auricular branch supplies medial aspect of tympanic membrane XXXX
- E. It gives branch to carotid sinus and body

**All are not true regarding the median nerve except**

- A. It crosses the brachial artery from medial to lateral side
- B. It is liable to injury in cases of fracture of medial epicondyle
- C. It enters the forearm between two heads of flexor carpi ulnaris
- D. Extended abducted thumb occurred in cases of its injury
- E. In the forearm ,it lies on the flexor digitorum profundus XXXX

**Regarding the iliohypogastric nerve, all are true except**

- A. It emerges from the lateral border of psoas major
- B. It pierces the transverses abdominis and passes between it and internal oblique
- C. It pierces the internal oblique and passes between it and external oblique
- D. It supplies skin of suprapubic region
- E. It supplies skin of medial part of gluteal regionXXXX

**The muscles which prevent falling of the pelvis on the unsupported side are supplied by:**

- A. The sciatic nerve
- B. The femoral nerve
- C. The common peroneal nerve
- D. The superior gluteal nerve XXXX
- E. The inferior gluteal nerve

**NS11 final exam**

**The following structure is one of the content of the posterior triangle**

- A. The cranial part of accessory nerve
- B. The preauricular lymph nodes
- C. The greater occipital nerve
- D. The superior belly of omohyoid
- E. The external jugular vein XXXXX

**The following structure lies deep to hyoglossus muscle**

- A. The hypoglossal nerve
- B. The glossopharyngeal nerve XXXX
- C. The lingual nerve
- D. The spinal part of accessory nerve
- E. The submandibular ganglion

**Regarding the tongue, all are true except**

- A. The genioglossus of both sides protrude the tongue
- B. The genioglossus inserted into posterior part of tongue side XXX
- C. The styloglossus inserted into the tongue side from apex to root
- D. The styloglossus supplied by the hypoglossal nerve
- E. The palatoglossus inserted into tongue side at junction of its oral and pharyngeal parts

**The lateral aspect of tympanic membrane (ear drum) supplied by**

- A. The auriculotemporal nerve and vagus nerve XXXX
- B. The auriculotemporal nerve and great auricular nerve
- C. The tympanic plexus
- D. The tympanic branch of glossopharyngeal nerve
- E. The chorda tympani nerve

**The medial wall of the tympanic cavity (middle ear) had the following structures except**

- A. The promontory and tympanic plexus
- B. The oval window
- C. The round window
- D. The horizontal part of facial canal
- E. The aditus ad antrum XXXX

**Regarding the hypoglossal nerve, all are wrong except**

- A. Its motor fibers arise from nucleus ambiguus
- B. It leaves the skull through the posterior condylar canal
- C. Fibers of C1 join it in the cranial cavity
- D. Genioglossus supplied by C1 fibers through the hypoglossal nerve
- E. It passes superficial to the hyoglossus muscle in the neck XXXX

**Regarding the glossopharyngeal nerve, one statement is wrong**

- A. Its taste fibers end in nucleus solitarius
- B. It passes between the middle constrictor and superior constrictor during its course

- C. It crosses the external and internal carotid arteriesXXXX
- D. It supplies the posterior 1/3 of tongue
- E. Its pharyngeal branch forms the sensory part of pharyngeal plexus

**The ulnar nerve**

- A. Its root value are C5,6,7,8 and T1
- B. It pierces the deep fascia in the middle of upper arm
- C. It lies on the flexor carpi ulnaris
- D. It supplies the adductor pollicis muscle XXXX
- E. It supplies the palmer and dorsal surfaces of lateral 1 1/2 fingers

**Loss of sensation on dorsal surface of distal phalanx of middle finger occurs in injury of:**

- A. The axillary nerve
- B. The radial nerve
- C. The median nerve XXXX
- D. The ulnar nerve
- E. The musculocutaneous nerve

**The obturator nerve**

- A. It emerges at medial border of psoas majorXXXX
- B. It enters the thigh deep to inguinal ligament
- C. It supplies the obturator internus
- D. It supplies skin of anterior 1/3 of scrotum
- E. It supplies skin of medial side of leg

**The lateral planter nerve supplies the following structures except**

- A. The lateral 1/3 of skin of sole of foot
- B. The lateral 2 lumbricals XXXXX
- C. The planter interossei
- D. The adductor hallucis
- E. The abductor digiti minimi

**The skin of medial side of big toe supplied by**

- A. The saphenous nerve
- B. The deep peroneal nerve
- C. The superficial peroneal nerve XXXX
- D. The sural nerve
- E. The sural communicating nerve

### **NS 11 make up exam**

**The following structures form the floor of the posterior triangle except**

- A. The inferior belly of omohyoid XXXX
- B. The splenius muscle
- C. The levator scapulae
- D. The scaleneus medius
- E. The scaleneus anterior

**The following muscles are supplied by ansa cervicalis except**

- A. The sternohyoid
- B. The sternothyroid
- C. The thyrohyoid XXX
- D. The superior belly of omohyoid
- E. The inferior belly of omohyoid

**Regarding the suprahyoid muscles, one statement is wrong**

- A. The stylohyoid is supplied by branch of facial nerve
- B. The anterior belly of digastric supplied by the mandibular nerve
- C. The geniohyoid is supplied by the ansa cervicalis XXXX
- D. The hyoglossus muscle inserted into posterior 1/2 of tongue side
- E. The mylohyoid is supplied by the mandibular nerve

**The following muscle is supplied by the cranial part of accessory nerve**

- A. The genioglossus
- B. The hyoglossus
- C. The palatoglossus XXXX
- D. The longitudinal group of intrinsic muscles
- E. The transverse group of intrinsic muscles

**All are true regarding the middle ear (tympanic cavity) except**

- A. It communicates with the nasopharynx by the auditory tube
- B. It communicates with mastoid antrum through the aditus ad antrum
- C. It contains tensor tympani and stapedius muscles
- D. The facial nerve passes in its anterior and lateral walls XXX
- E. Its lateral wall contains anterior and posterior canalicular foramina

**Regarding the facial nerve, all are true except**

- A. It leaves the skull through stylomastoid foramen
- B. It enters the parotid through its posteromedial surface
- C. It supplies muscles of face, scalp and platysma
- D. It supplied tensor tympani muscle XXXX

E. It supplies the posterior belly of digastric and stylohyoid

**The cervical plexus**

- A. Lies between levator scapulae and scaleneus medius
- B. Lies between scaleneus medius and scaleneus anterior
- C. Lies on levator scapulae and scaleneus medius XXXX
- D. Lies on scaleneus anterior and scaleneus medius
- E. Lies on splenius capitis and semispinalis

**The following are the cutaneous branches of the cervical plexus except**

- A. The great auricular nerve
- B. The great occipital nerve XXXX
- C. The lesser occipital nerve
- D. The transverse cervical nerve
- E. The supraclavicular nerve

**Concerning the glossopharyngeal nerve, all are true except**

- A. Its parasympathetic fibers arise from inferior salivatory nucleus
- B. Its motor fibers arise from nucleus ambiguus
- C. It is attached to groove between olive and inferior cerebellar peduncle
- D. It passes superficial to hyoglossus muscle XXXX
- E. It gives muscular branch to styloglossus

**Regarding the vagus nerve, all are true except**

- A. Its parasympathetic fibers arise from dorsal vagal nucleus
- B. Its motor fibers arise from nucleus ambiguus
- C. It passes posterolateral to internal jugular vein in the carotid sheath XXXX
- D. It gives branches to superficial and deep cardiac plexuses
- E. The recurrent laryngeal nerve supply all muscles of larynx except cricothyroid

**Concerning the axillary nerve, one statement is correct**

- A. The lower lateral cutaneous nerve of arm is one of its branches
- B. It is liable to be injured in fracture of anatomical neck of humerus
- C. It gives branches to deltoid and teres major
- D. It passes through the quadrangular intramuscular space XXXX
- E. Its injury leads to loss of sensation of lateral 1/2 of anterior aspect of forearm

**The posterior interosseous nerve supplied the following muscles except**

- A. The extensor carpi radialis longus XXXX
- B. The extensor carpi radialis brevis
- C. The extensor pollicis longus
- D. The abductor pollicis longus
- E. The extensor indicis

### 1.The cornea :

- a. Is a biconvex lens with a dioptric power of about 42 Δ .
- b. It obtains its nutrients and oxygen from the lachrymal fluid and atmospheric air.
- c. Its surface epithelium contains minute irregularities that are corrected by the lachrymal film .
- d. Its dioptric power is affected by the intra-ocular pressure .
- e. Is a component of the middle coat of the eye .

### 2.Concerning transparency of cornea the followings are true statements .

#### EXCEPT .

- a. Its composed of a stratified squamous non-keratined surface epithelium .
- b. It is supplied by myelinated nerve fibers .
- c. It is dehydrated .
- d. Its substantia propria fibers are regular in size, in diameter and in layer arrangement .
- e. It is avascular .

### 3.In the emmetropic eye .

- a. Parallel rays are focused on the retina, by the help of accommodation.
- b. An object at a distance more than 6 meters, needs accomodation to be focused on the retina .
- c. During near vision , the ciliary radial muscle fibers relax .
- d. The ciliary circular muscle fibres contract during near vision .
- e. The image of the object falls on the optic disc .

### 4.The aqueous humour .

- a. Is a fluid filterd from the pupil .
- b. Is constant in composition and pressure .
- c. It is formed only by the ciliary processes .
- d. It circulates from the anterior chamber through the pupil to the posterior chamber .
- e. An acetyl choline esterase inhibitor decreases the rate of its formation .

### 5.In the human retina .

- a. The periphery of the retina can perceive colours in bright light .
- b. The photochemical substance in the retinal rods & cones is termed transducin .
- c. The bipolar : ganglion cells in the retinal periphery is 1 : 1 .
- d. The fovea nutrient supply is directly through the choroid and the retinal capillaries .
- e. The retinal pigmented epithelium is only for the supply of receptors with vitamin A .

### 6.Presbyopia :

- a. Is due to an increase of dioptric power of the lens in old age .
- b. It is corrected by a concave lens .
- c. It is corrected by two convex lenses one for reading & one for walking .
- d. The object image is focused in front of the retina .
- e. Is due to weakness of the eye lens & cornea occurring in old age .

**7. Concerning binocular vision the following are true statements . EXCEPT .**

- a. The visual field is larger than the monocular field .
- b. Depth perception is present in both monocular & binocular vision .
- c. Vision is stereoscopic .
- d. Estimation of distances is highly accurate .
- e. It is the ability of the retina to fuse two figures to be felt as one .

**8. Which of the following is a function of the middle ear ?**

- a. Coupling of sound energy from the external to the middle ear .
- b. Transduction of mechanical energy of sound to electric impulses .
- c. Impedance matching by effectively transferring sound from the air filled ear to the fluid filled cochlea .
- d. Amplification of sound energy by the relative area of the tympanic membrane to foot plate of the stapes of about 100 times .
- e. Is direct transmission of sound energy to the auditory nerve .

**9. With regards to the basilar membrane of the inner ear .**

- a. Its longer fibers near the oval window vibrate best at high frequency sounds .
- b. The short stiff fibers near the apex vibrate best at low frequency .
- c. Its fibers progressively increase in length from base to top of cochlea .
- d. Is innervated by the acoustic division of the eighth cranial nerve .
- e. Its displacement is transduced by the outer hair cells of the organ of Corti .

**10. Concerning the organ of Corti the followings occur . EXCEPT .**

- a. Its up-and-down movement produces back-and-forth movement of stereocilia of hair cells .
- b. It transduces mechanical energy applied to the basilar membrane into electric potential changes .
- c. Both inner & outer hair cells contribute to transduction of sound energy.
- d. The processes of the hair cells are present in the endolymph and their bases are present into perilymph .
- e. Depolarization of hair cells release glutamate that stimulate the auditory nerve .

**11. Concerning the auditory cortex .**

- a. It lies in the inferior temporal gyrus .
- b. The primary auditory cortex is stimulated by the auditory association area .

- c. Bilateral destruction of primary auditory area leads to complete loss of hearing perception .
- d. In the primary auditory area different sound frequencies are perceived specifically in different parts : tonotopic organization .
- e. Destruction of auditory association area leads to loss of sound discrimination as regards tone & locality .

#### **12. Taste sensation :**

- a. Is perceived in the precentral area for the tongue .
- b. Its receptors are telereceptors .
- c. There are mainly four types of taste sensations .
- d. Receptors are only present on the tongue and mouth .
- e. Sour taste is caused by closure of  $K^+$  channels, depolarization of the receptor, opening of the voltage gated  $Ca^{2+}$  channels that cause chemical transmitter release .

#### **13. Concerning the olfactory receptors :**

- a. Are weakly sensitive chemoreceptors .
- b. They adapt very rapidly on continuous exposure to an odorant .
- c. The ability of discrimination is limited to a small number of odorants .
- d. These receptors are affected by chemical changes in the interstitial fluid surrounding them .
- e. Are present throughout the nasal cavity .

#### **14. The H wave record .**

- a. Is recorded by electric stimulation of a motor nerve .
- b. Its record is followed by the M wave .
- c. Is a polysynaptic reflex record .
- d. Is an electromyographic record .
- e. Is a compound action potential record of the stimulated mixed nerve .

# ارشيف وتين



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26 February 2017 at 13:39 · 🌐

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26  
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Embryo :

1. Meatal plug dissolves at 7th month .
2. Internal eardrum from endoderm of tympanic cavity

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in chronic chagas disease what is the most affected organ ?

1. heart
2. GIT
3. spleen
4. liver
5. ( 1+ 2 )

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Heart +GIT

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