

GENESIS

Post Graduation Medical Orientation Centre
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FCPS PART-I MOCK TEST-I

SUBJECT : Ophthalmology
PAPER : II

Exam Date	:	Mock-I	:	13-12-20/17-12-20/20-12-20
		Mock-II	:	25-12-20/26-12-20/27-12-20
Exam Time	:	2.30.pm-4.00pm		
Total Number	:	100		

Question 26-50 based on single answer

1. Physical properties of vitreous are

- a) Weight 8gm, volume 4 cc
- b) Refractive index is 1.3349
- c) Collagen fibres allow the expansion
- d) Hyaluronic acid is responsible for visco elasticity
- e) Plasticity is not due to collagen fibres

2. Regarding lens proteins

- a) Soluble proteins are the structural proteins
- b) Beta crystallins constitute most of the proteins
- c) Alpha crystallins constitute most of the proteins
- d) Albuminoids make up the bulk of refractive fibres
- e) Gamma crystalline level is high in nucleus

3. The following amino acids are present in lens protein –

- a) Arginine
- b) Tyrosine
- c) Cysteine
- d) Serine
- e) Tryptophan

4. Regarding composition of lens –

- a) Water constitute 35% of wet weight
- b) Protein constitute 34% of weight
- c) Cortex is not less hydrated than nucleus
- d) Hydration increases with age
- e) Dehydration is maintained by active Na pump

5. Regarding the metabolism of lens –

- a) O_2 is mandatory
- b) Lental opacity occurs due to glucose deprivation
- c) Lens gets glucose mainly from vitreous
- d) 80% of glucose metabolism occurs through aerobic glycolysis
- e) Sugar cataract develops through sorbital pathway

6. Regarding tear film –

- a) Outer oily layer is called lipid layer
- b) Lipid layer enhances evaporation
- c) Aqueous layer is secreted from accessory glands of Krause
- d) Main bulk of tear film thickness is made of mucus layer
- e) Mucus layer is secreted by conjunctival glands

7. Properties of tear film are

- a) Clear, salty, slightly acidic
- b) Volume is highest in youth
- c) Rate of secretion is 1.2 ul/min
- d) Refractive index is 1.357
- e) P^H ranges from 6.3 to 7.3

8. The following remains in greater concentration in tear than plasma

- a) K
- b) Na
- c) HCO_3
- d) Urea
- e) Glucose

9. Regarding lacrimal pump

- a) It is operated by blinking
- b) Orbicularis oris is the muscle of action
- c) Contraction of orbicularis causes compression of ampulla
- d) Lacrimal sac normally remains open
- e) Relaxation of orbicularis causes expansion of canaliculi

10. Regarding the biochemistry of vitreous humor

- a) Water forms 99% of wet weight
- b) Contains type – IV collagen
- c) Concentration of ascorbic acid is higher than plasma
- d) Amino acid concentration is lower than plasma
- e) HCO_3 acts as buffer

11. Regarding pump and leak theory of lens

- a) Na^+ diffuses out through posterior surface
- b) K^+ diffuses inside through anterior surface
- c) Na^+ moves to aqueous humor through anterior surface
- d) Na^+ enters into lens from vitreous
- e) K^+ enters into vitreous through posterior surface

12. Physical changes of lens with age –

- a) Increased weight & thickness
- b) Increased light transmission
- c) Decreased light absorbance
- d) No changes in refractive index
- e) Increased light scattering

13. Regarding aqueous formation

- a) Ciliary processes are the site
- b) Mostly by ultrafiltration (70%)
- c) First step is stromal pool
- d) Na is mainly transported by active transport
- e) Rate of formation is 2 ml/min

14. Regarding ciliary body receptors

- a) Beta 2 stimulation causes raised IOP
- b) Alpha 2 stimulation causes raised IOP
- c) Alpha 2 agonist is used as anti glaucoma medication
- d) Beta receptor stimulates adenyl cyclase
- e) Adenyl cyclase decreases aqueous production

15. Factors influencing IOP

- a) Hypermetropes have lower IOP
- b) Raised episcleral venous pressure raises IOP
- c) Systemic HTN has no role
- d) IOP is highest in early morning
- e) Not all anaesthetic drugs decrease IOP

16.Regarding biochemical composition of cornea

- a) Homogenous in composition
- b) 80% is water
- c) Epithelium consists 90% of total wet weight
- d) Stroma consists 10% of total thickness
- e) Type – 1 collagen is predominant

17.Cornea contains the following Ig –

- a) IgG
- b) IgA
- c) IgM
- d) IgD
- e) IgE

18.Regarding cornea

- a) Epithelium is heterogenous
- b) Endothelium is multilayered
- c) Stroma constitutes 80% water
- d) Descemet's membrane has GAG
- e) Epithelium is hydrophobic

19. Corneal endothelial pumps are

- a) Na-K atpase
- b) Na-HCO₃ co transport
- c) Na-H counter transport
- d) H-K pump
- e) HCO₃-Cl counter transport

20. Regarding corneais?

- a) Epithelium is rich in K
- b) Stroma is rich in Na
- c) Glucose and amino acid enter through active transport
- d) Stroma contains 30% collagen
- e) Keratansulphate concentration is more than chondroitin sulphate

21. Drugs with following criteria can enter cornea easily

- a) Lipophilic
- b) Hydrophilic
- c) Amphipathic
- d) Less molecular size
- e) Both ionic and non ionic

22. The following are for extra ocular muscles

- a) Prime mover in case of intorsion is inferior oblique
- b) Superior oblique causes depression and adduction
- c) Superior rectus causes adduction
- d) Prime mover of extorsion is superior oblique
- e) Extorsion is an action of inferior rectus

23. Action of yoke muscle-

- a) Right LR is the yoke muscle of left MR
- b) Yoke muscles follow Hering's law
- c) Yoke muscles follow Sherington's law
- d) Antagonists follow Hering's law
- e) Agonists move towards their direction

24. Characteristics of EOM

- a) Fast twitch myofibre is scarce
- b) Slow twitch myofibre is abundant
- c) Rich in mitochondria
- d) Rich in ER
- e) EOM is resistant to oxidative stress

25. If right optic nerve is damaged

- a) Direct light reflex absent RE
- b) Consensual reflex absent in LE
- c) Consensual reflex present in RE
- d) Direct light reflex absent in LE
- e) LE is unaffected

Each question below contains five suggested answers- choose the one best response to each question (26-50)

26. Regarding Lateral Geniculate Body which one is true?

- a) It has 4 well defined layers
- b) Layers 1,4,6 receive output from both eyes
- c) Layers 2,3,5 receive output from contralateral eye
- d) Layers 1,4,6 receive output from ipsilateral eye
- e) Magnocellular layers receive their visual input from Y ganglion cells of retina

27. Which sequence is true for angle structures (from behind forwards)?

- a) Ciliary body>Schlemm's canal>Scleral spur>Schwalbe line
- b) Ciliary body>trabecular meshwork>Scleral spur>Schwalbe line
- c) Scleral spur>trabecular meshwork>Schwalbe line
- d) Ciliary body>Trabecular meshwork>Schwalbe line
- e) Trabecular meshwork>Ciliary body>Scleral spur>Schwalbe line

28. Which of the following is not true?

- a) Optical axis is the line passing through the center of cornea and the center of lens which meets the temporal side of retina
- b) Visual axis is the line joining the fixation, nodal point and the fovea
- c) Angle alpha is formed between optical axis and visual axis at nodal point
- d) Angle kappa is formed visual axis and pupillary line.
- e) Angle gamma is between optical axis and fixation axis.

29. Xanthophil absorbs which light?

- a) Yellow
- b) Red
- c) Green
- d) Blue
- e) Indocyanine

30. About Purkinje image –

- a) Third image is formed by concave surface
- b) Fourth image is virtual and erect
- c) Third image is real
- d) Fourth image is formed by posterior surface of the cornea
- e) Fourth image is real and inverted

31. Which structure is most responsible for Parkinson's disease-

- a) Substantia nigra
- b) Caudate nucleus
- c) Putamen
- d) Subthalamic nucleus
- e) Lentiform nucleus

32. What will happen if right optic nerve is damaged in the optic canal

- a) Direct light reflex absent in left eye
- b) Consensual light reflex present in Right eye
- c) Direct light reflex present in right eye
- d) Consensual light reflex present in left eye
- e) RAPD present in left eye

33. Which one is incorrect about optic nerve

- a) Intraocular part 0.7 mm
- b) Intraorbital part 3 cm
- c) Intra-canalicular part is 6 cm
- d) Intracranial part 1 cm
- e) Formed by axons of ganglion cells

34. Temporal lobe lesion will not cause

- a) Disturbance of memory
- b) Cortical deafness
- c) Homonymous hemianopia
- d) Motor aphasia
- e) Complex partial seizure

35. Thalamus is responsible for

- a) Chorea
- b) Hemiballismus
- c) Autonomic control
- d) Spontaneous pain
- e) Thermal regulation

36. Which of the following is a collagen of vitreous –

- a) V
- b) IX
- c) II
- d) I
- e) III

37. Which amino acid is not a constituent of lens protein?

- a) Alanine
- b) Lysine
- c) Methionine
- d) Hydroxyproline
- e) Ornithine

38. Structural protein of lens is -

- a) Beta – crystalline
- b) Mucoprotein
- c) Albuminoid protein
- d) Glycoprotein
- e) Lipoprotein

39. Formation of aqueous humor mainly occurs by –

- a) Diffusion
- b) Secretion
- c) Ultrafiltration
- d) Active transport
- e) Osmosis

40. Regarding tear film structure which one is not true –

- a) Lipid layer comes from Meibomian gland
- b) Aqueous layer comes from goblet cells
- c) Mucus layer comes from goblet cells
- d) Lacrimal gland secretes aqueous
- e) Mucin layer is secreted by conjunctival goblet cells

41. Which one is false for yoke muscle-

- a) Right SR is the yoke muscle of left IO
- b) Left MR is the yoke muscle right LR
- c) Right IO is the yoke muscle of left IR
- d) Right IO is the yoke muscle of left SR
- e) Left IR is the yoke muscle of right SO

42. Which one is true -

- a) Antagonist of right SR is left IR
- b) Agonist of right SR is right IO
- c) Yoke muscle of right IO is left SO
- d) Left MR acts in dextroversion
- e) Right SR acts in levelevation

43. Which one is false about the optics of cornea –

- a) Ant surface +48D
- b) Post surface +5D
- c) Corneal power depends on curvature
- d) Net refractive power is +43D
- e) Refractive index is 1.37

44. Which collagen is predominant in cornea-

- a) I
- b) II
- c) III
- d) V
- e) IV

45. Which layer of cornea maintains most of its dehydration-

- a) Epithelium
- b) Bowman's membrane
- c) Stroma
- d) Descemet's membrane
- e) Endothelium

46. Which is component of BSV-

- a) Fusion
- b) Convergence
- c) Divergence
- d) Visual acuity
- e) ARC

47. Which of the followings pass through Annulus of Zinn-

- a) Frontal N.
- b) Lacrimal N.
- c) Sup. Ophthalmic vein
- d) Trochlear N.
- e) Oculomotor N.

48. The following nerves arise from ventral aspect of midbrain except-

- a) Oculomotor N.
- b) Trochlear N.
- c) Trigeminal N.
- d) Abducent N.
- e) Facial N.

49. Which one is not a cause of pupil involving 3rd N. palsy-

- a) Trauma
- b) Extradural hematoma
- c) Tumor
- d) HTN
- e) Heartache

50. Regarding the branches of ophthalmic nerve which one is not true-

- a) Frontal N. is a main branch
- b) Supraorbital N. arises from frontal N.
- c) Short ciliary nerves arise from nasociliary N.
- d) Supratrochlear N. arises from frontal N.
- e) Post. Ethmoidal N. arises from nasociliary N.

Opthalmology Mock-1, Pape-2

1. FTTTF [Ref:Anatomy and physiology of eye by Khurana]
2. TTFFT [Ref:Anatomy and physiology of eye by Khurana]
3. TTFTF [Ref:Anatomy and physiology of eye by Khurana]
4. FTTFT [Ref:Anatomy and physiology of eye by Khurana]
5. FTFTF [Ref:Anatomy and physiology of eye by Khurana]
6. TFTFT [Ref:Anatomy and physiology of eye by Khurana]
7. FTTTF [Ref:Anatomy and physiology of eye by Khurana]
8. TFTFF [Ref:Anatomy and physiology of eye by Khurana]
9. TFTFT [Ref:Anatomy and physiology of eye by Khurana]
10. TTFTT [Ref:Anatomy and physiology of eye by Khurana]
11. FTTTT [Ref:Anatomy and physiology of eye by Khurana]
12. TTFFT [Ref:Anatomy and physiology of eye by Khurana]
13. TTFTF [Ref:Anatomy and physiology of eye by Khurana]
14. TFTTF [Ref:Anatomy and physiology of eye by Khurana]
15. TTTTF [Ref:Anatomy and physiology of eye by Khurana]
16. FTFTF [Ref:Anatomy and physiology of eye by Khurana]
17. TTTFF [Ref:Anatomy and physiology of eye by Khurana]
18. TFTFT [Ref:Anatomy and physiology of eye by Khurana]
19. TTTFT [Ref:Anatomy and physiology of eye by Khurana]
20. TTFFT [Ref:Anatomy and physiology of eye by Khurana]
21. FFTTT [Ref:Anatomy and physiology of eye by Khurana]
22. FFTFT [Ref:Anatomy and physiology of eye by Khurana]
23. TTFFT [Ref:Anatomy and physiology of eye by Khurana]
24. FFTFT [Ref:Anatomy and physiology of eye by Khurana]
25. TTTFF [Ref:Anatomy and physiology of eye by Khurana]
26. E[Ref:Anatomy and physiology of eye by Khurana]
27. C[Ref:Anatomy and physiology of eye by Khurana]
28. A [Ref:Theory and Practice of Optics and Refraction by Khurana]
29. D [Ref:Anatomy and physiology of eye by Khurana]
30. E[Ref:Anatomy and physiology of eye by Khurana]
31. A [Ref:Anatomy and physiology of eye by Khurana]
32. B [Ref:Anatomy and physiology of eye by Khurana]
33. C [Ref:Anatomy and physiology of eye by Khurana]
34. D [Ref:Anatomy and physiology of eye by Khurana]
35. D [Ref:Anatomy and physiology of eye by Khurana]
36. C [Ref:Anatomy and physiology of eye by Khurana]
37. D [Ref:Anatomy and physiology of eye by Khurana]
38. A [Ref:Anatomy and physiology of eye by Khurana]
39. B [Ref:Anatomy and physiology of eye by Khurana]
40. B [Ref:Anatomy and physiology of eye by Khurana]
41. C [Ref:Anatomy and physiology of eye by Khurana]
42. D [Ref:Anatomy and physiology of eye by Khurana]
43. B [Ref:Anatomy and physiology of eye by Khurana]
44. A [Ref:Anatomy and physiology of eye by Khurana]
45. E [Ref:Anatomy and physiology of eye by Khurana]
46. A [Ref:Anatomy and physiology of eye by Khurana]
47. E [Ref:Anatomy and physiology of eye by Khurana]
48. B [Ref:Anatomy and physiology of eye by Khurana]
49. D [Ref:Anatomy and physiology of eye by Khurana]
50. C [Ref:Anatomy and physiology of eye by Khurana]