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Behind the most beautiful eyes, lay secrets deeper and darker than the mysterious sea.



**BY :-**

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(CMC LARKANA)**



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# LENS

2/3

1. The most common cause of cataract is

- A. Trauma
- B. Smoking
- C. Aging →
- D. Toxins
- E. Heredity

2. Hyper-mature cataract in which the lens nucleus floats freely in the capsular bag is called

- A. Intumescent
- B. Floating Cataract →
- C. Immature Cataract
- D. Morgagnian Cataract
- E. Simple Cataract

2/3

3. The clinical degree of cataract formation is judged primarily by

- A. Snellen Visual Acuity Test →
- B. Perianetry
- C. Light reflex test
- D. Ophthalmoscopy
- E. Confrontation Test

✓

4. The earliest symptom of nuclear sclerosis after middle age may be

- A. Improved far vision without glasses
- B. Improved near vision without glasses →
- C. Improved night vision
- D. Diplopia
- E. Photophobia

5. Common symptoms of posterior subcapsular cataracts are

- A. Glare and reduced vision under bright light conditions →
- B. Monocular diplopia and photophobia
- C. Improved near vision and photophobia
- D. Improved far vision and photophobia

6. Lens extraction in the treatment of age related cataract definitely improves visual acuity in over what percentage of cases?
- 70%
  - 80%
  - 90% →
  - 60%
  - 50%
7. Acquired childhood cataracts arise most commonly from
- Uveitis
  - Acquired ocular infections
  - Drugs
  - Trauma →
  - Toxins
8. Congenital large white dense cataracts may present as
- Leukocoria
  - Buphthalmos
  - White eye
  - Corneal haziness
  - Discharge
9. The most threatening complications of unilateral infantile cataract is
- Astigmatism  
Amblyopia →  
Myopia  
Endophthalmitis  
Hyperopia
10. The lens is best examined when pupil is
- Fixed  
Semi-dilated  
Dilated  
Constricted  
Unresponsive to drugs
11. Optical correction after childhood cataract surgery is done by
- Intra-ocular lens implantation
  - Contact lens correction →
  - Spectacles
  - No need of optical correction
  - Photorefractive surgery

12. The cataract secondary to intra-ocular disease is called
- Complicated cataract →
  - Simple cataract
  - Ophthalmologic cataract
  - Significant cataract
  - Glass blowers cataract
13. All of the following intraocular diseases are commonly associated with the development of cataract except
- Recurrent Uveitis
  - Glaucoma
  - Retinitis Pigmentosa
  - Retinal Degeneration →
  - Retinal Detachment
14. All of the following systemic diseases are associated with cataract except
- Diabetes mellitus
  - Hypocalcemia
  - Myotonic Dystrophy
  - Galactosemia
  - Hypertension →
15. All of the following drugs can cause cataract except
- Corticosteroids  
Mydriatics →  
Strong Miotics  
Amiodarone  
Phenothiazines
16. "After Cataract" is the cataract which is formed
- After age 50  
After trauma  
After Glaucoma  
After intra capsular lens extraction  
After extra capsular lens extraction →



17. "Punctate Dot Cataract" is sometimes seen as and ocular complication of
- Diabetes mellitus
  - Infection
  - Trauma
  - Surgery
  - Hypertension
18. "After cataract" is treated by
- Removal of implanted lens
  - Argon lenser
  - Neodymium YAG laser
  - Antibiotic
  - Steroids
19. Complications of Neodymium: YAG laser in removal of after cataract are all except
- Transient rise in intra-ocular pressure
  - Damage to intra-ocular lens
  - Cystoids macular edema
  - Transient decrease in IOP
  - Forward displacement of vitreous
20. The generally preferred method of cataract surgery in adults and older children is
- Extra-capsular lens extraction
  - Intra-capsular lens extraction
  - Pars-plana lensectomy
  - None of the above
21. The most common form of extra-capsular lens extraction is the technique of
- Phacofragmentation
  - Phacoemulsification
  - Phacodisruption
  - Phacodecomposition
  - Phacoevaporation

22. After cataract surgery, the patient is usually advised to
- Keep the eye closed most of the time
  - Keep the eye moist most of the time
  - Keep the eye open most of the time
  - Avoid staining or lifting for a month
  - Avoid straining or lifting for a year
23. Hereditary lens dislocation is commonly associated with
- Homocystinuria
  - Marfan Syndrome
  - Ehler Danlos Syndrome
  - A & B
  - All of Above
24. A partially dislocated lens is often complicated by
- Cataract
  - Glaucoma
  - Retinal Detachment
  - Inflammation
  - Choroiditis

**LENS****ANSWERS & REFERENCES**

- |                                 |  |                               |
|---------------------------------|--|-------------------------------|
| 1. C<br>Refer p. 174 Vaughan    | 2. D<br>Refer p. 175 Vaughan               | 3. A<br>Refer p. 175 Vaughan  |
| 4. B<br>Refer p. 175 Vaughan    | 5. A ✓<br>Refer p. 175 Vaughan             | 6. C<br>Refer p. 175 Vaughan  |
| 7. D<br>Refer p. 175 Vaughan    | 8. A<br>Refer p. 175 Vaughan               | 9. B<br>Refer p. 175 Vaughan  |
| 10. C<br>Refer p. 174 Vaughan   | 11. B<br>Refer p. 180 Vaughan              | 12. A<br>Refer p. 177 Vaughan |
| 13. D ✓<br>Refer p. 178 Vaughan | 14. E<br>Refer p. 178 Vaughan              | 15. B<br>Refer p. 178 Vaughan |
| 16. E<br>Refer p. 178 Vaughan   | 17. A<br>Refer p. 178 Vaughan (Figure 8-9) | 20. A<br>Refer p. 178 Vaughan |
| 18. C<br>Refer p. 180 Vaughan   | 19. D<br>Refer p. 179 Vaughan              | 23. D<br>Refer p. 180 Vaughan |
| 21. B<br>Refer p. 178 Vaughan   | 22. D<br>Refer 179 Vaughan                 |                               |
| 24. A<br>Refer p. 181 Vaughan   |  |                               |

**LAST MINUTE POINTS:  
CATARACT**

- Aging is the most common cause of cataract.
- The lens is best examined when the pupil is dilated.
- The clinical degree of cataract formation is judged primarily by Snellen's visual acuity test
- The earliest symptom of age related cataract (nuclear) may be improved near vision without glasses (2nd sight).
- Acquired childhood cataracts arise most commonly from trauma.
- Large dense white congenital cataracts present as leukocoria.
- The visual prognosis of age related cataract after surgery is better than childhood cataract after surgery.
- Glass Blower's cataract is caused by over-exposure to heat.
- Cataract secondary to intraocular disease (complicated cataract) are chronic or recurrent uveitis, glaucoma, trauma, retinitis pigmentosa and retinal detachment.
- Systemic diseases causing cataract are DM, hypocalcemia, myotonic dystrophy, atopic dermatitis, galactosemia and Down's syndrome,
- Drugs causing cataract are amiodarone, phenothiazine, corticosteroids and strong miotics like phospholine.
- Punctate dot cataract may be congenital or complication of diabetes mellitus.
- After cataract denotes opacification of posterior capsule following extracapsular lens extraction and may present as FISH EGG APPEARANCE (ELSCHING'S PEARLS).
- The preferred method for lens extraction in adults and older children is extracapsular lens extraction.



- Technique of phacoemulsification is now the most common form of extra capsular lens extraction.
- The ability of an eye to adjust its focus from distance to near vision is called ACCOMODATION
- ACCOMODATION
  - At Birth 14-16 diopters
  - At 25 years of age 7-8 diopter
  - At 50 years of age 1-2 diopter
- A fully dislocated lens is often complicated by G lau coma as well as uveitis.
- The relaxation of ciliary muscles flattens the
- The contraction of ciliary muscles makes the lens spherical
- Hypermature cataract is called MORGANION cataract

## GLAUCOMA

1. Glaucoma is characterized by
  - A. Optic disc cupping
  - B. Visual field loss
  - C. Blurred vision
  - D. A & B
  - E. All of above

2. The most common type of glaucoma in blacks and whites is
  - A. Primary angle closure
  - B. Secondary glaucoma
  - C. Primary open angle
  - D. Phacolytic glaucoma
  - E. Pigmentary glaucoma

3. Normal tension glaucoma is the most common type in
  - A. USA
  - B. Pakistan
  - C. Japan
  - D. China
  - E. UK

4. The volume of aqueous is approximately
  - A. 250 ml
  - B. 250  $\mu$ L
  - C. 2.5  $\mu$ L
  - D. 500  $\mu$ L
  - E. 1000  $\mu$ L

5. Intra-ocular inflammation causes an increase in protein concentration of aqueous. This is called
  - A. Plasmoid aqueous
  - B. Serous aqueous
  - C. Protoid aqueous
  - D. Hemorrhagic aqueous

6. One of the most common cause of increased intra-ocular pressure in uveitis is
- A. Inflammation
  - B. Use of topical steroids ✓
  - C. Anterior synechiae
  - D. Posterior synechiae
  - E. Trabecular blockage
7. The major mechanism of visual loss in glaucoma is -
- A. Retinal ganglion cell apoptosis
  - B. Retinal detachment
  - C. Corneal opacity
  - D. Macular edema
  - E. Rods and cones apoptosis
8. The most widely used instrument for tonometry is
- Pascal dynamic contour tonometer
  - Schiotz tonometer
  - Pneumatonometer
  - Goldmann applanation tonometer
  - Perkin's tonometer
9. IOP is overestimated in thick corneas. This difficulty may be overcome by the
- A. Pascla dynamic contour tonometer ✓
  - B. Schiotz tonometer
  - C. Pneumatonometer
  - D. Goldmann applanation tonometer
  - E. Perkin's tonometer
10. When the cornea has an irregular surface, the tonometer which can be used best is
- A. Pascla dynamic contour tonometer
  - B. Schiotz tonometer
  - C. Pneumatonometer ✓
  - D. Goldmann applanation tonometer
  - E. Perkin's tonometer

11. The normal range of IOP is
- A. 6-25 mmHg
  - B. 8-25 mmHg
  - C. 10-28 mmHg
  - D. 10-21 mmHg
  - E. 12-25 mmHg
12. Being able to see only Schwalbe's Line on gonioscopy means that the angle is
- A. Narrow ✓
  - B. Closed
  - C. Open
  - D. Wide
  - E. None of above
13. Clinical assessment in glaucoma involves all, except
- A. Gonioscopy
  - B. Tonometry
  - C. Optic disc assessment
  - D. Visual field examination
  - E. Retinoscopy → (Refractive Error).
14. Glaucomatous field loss involves mainly the
- Central 15 degrees
  - Central 30 degrees ✓
  - Central 60 degrees
  - Peripheral 30 degrees
  - Peripheral 60 degrees
15. The earliest change in glaucomatous field loss is
- A. Baring of blind spot ✓
  - B. Involvement of blind spot
  - C. Bjerrum's scotoma
  - D. Arcuate scotoma
  - E. Seidel scotoma
- NY  
ANAL



✓ 16. Visual field defects in glaucoma are not detected until there is what percent of retinal ganglion cell loss?

- A. 20%
- B. 30%
- ✓ C. 40% →
- D. 50%
- E. 90%

17. All of the following drugs are suppressors of aqueous production, except

- A. B-Blockers
- B. Apraclonidine
- C. Carbonic anhydrase inhibitors
- D. Prostaglandins
- E. Brimodine

18. Systemic carbonic anhydrase inhibitors are capable of suppressing aqueous production by

- A. 20-40%
- B. 10-30%
- C. 40-60%
- D. 60-80%
- E. 5-10%

✓ 19. Prostaglandins decrease IOP by which one of the following mechanisms?

- Increased outflow through trabecular meshwork
- Increased uveoscleral flow
- Reducing vitreous volume
- Reducing aqueous production
- All of the above

by increasing

20. The main use of hyperosmotic agents is in which type of glaucoma?

- A. Primary open angle
- B. Acute angle closure →
- C. Chronic angle closure
- D. Subacute angle closure
- E. Secondary glaucoma

21. The most commonly used hyperosmotic agent in glaucoma is

- A. Oral glycerine (Glycerol)
- B. Oral isosorbide
- C. I/V urea
- D. I/V mannitol
- E. Oral mannitol

22. Laser peripheral iridotomy is best done with

- A. Neodymium: YAG laser
- B. Argon laser
- C. CO<sub>2</sub> laser
- D. Excimer laser
- E. Cryton red laser

✓ 23. Which one of the following surgical procedures used in glaucoma markedly accelerates cataract formation?

- A. Goniotomy
- B. Trabeculotomy
- C. Viscofenotomy
- ✓ D. Trabeculectomy
- E. Iridotomy

24. The chief pathologic feature of primary open angle glaucoma is

- A. Posterior synechiae
- B. Degenerative process in trabecular meshwork
- C. Anterior synechiae
- D. Increased episcleral venous pressure
- E. Increased production of aqueous

25. Following conditions are associated with increased risk of primary open angle glaucoma, except

- A. Family history
- B. Myopia
- C. Blacks
- D. Hyperopia
- E. All of the above are risk factors

Handwritten notes:  
 HARR-PMDs → Steroid Responder  
 Hereditary Race Myopia  
 Age related disease Family history

26. For each mmHg reduction of IOP, there is an approximately what percentage of decreased risk of progression to glaucoma?

- A. 5%
- B. 10% →
- C. 15%
- D. 20%
- E. 30%

27. If there is extensive field loss due to glaucoma, the main object of therapy is to lower the IOP to less than

- A. 20 mmHg
- B. 18 mmHg
- C. 21 mmHg
- D. 15 mmHg →
- E. 25 mmHg

28. Which one of the following feature is most commonly seen in normal tension glaucoma as compared to primary open angle glaucoma?

- A. Disc haemorrhages →
- B. Optic disc cupping
- C. Peripheral visual field loss
- D. Pain in the eye
- E. Photophobia

29. The rate at which ocular hypertensive individuals develop glaucoma is

- A. 50-10%
- B. 1-2% →
- C. 10-20%
- D. 2-4%
- E. 20-40%

30. Which one of the following is/are risk factor/s for rapid progression of ocular hypertension to glaucoma?

- A. Increasing IOP
- B. Increasing age
- C. Greater disc cupping
- D. Diabetes mellitus
- E. All of the above →

31. The risk factor for primary angle closure glaucoma are all except

- A. Increasing age
- B. Female gender
- C. Family history
- D. Hyperopia
- E. Myopia

32. The acute attack of angle closure glaucoma is often precipitated by

- A. Pupillary dilation
- B. Pupillary constriction
- C. Day light vision
- D. Supine position
- E. Prone position

33. Clinical findings of acute angle closure glaucoma are all except

- A. Fixed moderately dilated pupil
- B. Excruciating pain
- C. Nausea and vomiting
- D. Shallow anterior chamber
- E. Fixed irregular pupil

34. About treatment of acute angle closure glaucoma all of the following are true except

- A. I/V and oral acetazolamide are given
- B. B-blockers are also used
- C. Peripheral iridotomy of fellow eye
- D. A and B only
- E. A, B and C

35. The treatment of subacute angle closure glaucoma is

- A. I/V carbonic anhydrase inhibitors
- B. Topical B-blockers
- C. Peripheral iridotomy
- D. Trabeculoplasty
- E. Iridectomy



36. Which one of the following steps should always be done as the first step in the management of chronic angle closure glaucoma?
- Peripheral iridotomy
  - Topical B-blockers
  - Trabeculectomy
  - Iridectomy
  - No treatment is required
37. The earliest and most common symptom of congenital glaucoma is
- Red eye
  - Epiphora
  - Photophobia
  - Blurred vision
  - Eye discharge
38. The cardinal sign of congenital glaucoma is
- Peripheral visual field loss
  - Central visual field loss
  - Corneal clouding
  - Increased IOP
  - Epithelial edema
39. Neovascular glaucoma is commonly seen in
- Diabetes mellitus
  - Central retinal artery occlusion
  - Central retinal vein occlusion
  - All of the above
  - A and C

## GLAUCOMA

### ANSWERS & EXPLANATIONS

- |                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 1. D<br>Refer p. 222 Vaughan  | 2. C<br>Refer p. 222 Vaughan  | 3. C<br>Refer p. 222 Vaughan  |
| 4. B<br>Refer p. 222 Vaughan  | 5. A<br>Refer p. 224 Vaughan  | 6. B<br>Refer p. 224 Vaughan  |
| 7. A<br>Refer p. 224 Vaughan  | 8. D<br>Refer p. 225 Vaughan  | 9. A<br>Refer p. 225 Vaughan  |
| 10. C<br>Refer p. 225 Vaughan | 11. D<br>Refer p. 225 Vaughan | 12. A<br>Refer p. 225 Vaughan |
| 13. E<br>Refer p. 225 Vaughan | 14. B<br>Refer p. 227 Vaughan | 15. A<br>Refer p. 227 Vaughan |
| 16. C<br>Refer p. 217 Vaughan | 17. D<br>Refer p. 227 Vaughan | 18. C<br>Refer p. 229 Vaughan |
| 19. B<br>Refer p. 229 Vaughan | 20. B<br>Refer p. 229 Vaughan | 21. A<br>Refer p. 229 Vaughan |
| 22. A<br>Refer p. 229 Vaughan | 23. D<br>Refer p. 230 Vaughan | 24. B<br>Refer p. 230 Vaughan |
| 25. A<br>Refer p. 230 Vaughan | 26. B<br>Refer p. 231 Vaughan | 27. D<br>Refer p. 231 Vaughan |
| 28. A<br>Refer p. 232 Vaughan | 29. B<br>Refer p. 232 Vaughan | 30. E<br>Refer p. 232 Vaughan |
| 31. E<br>Refer p. 232 Vaughan | 32. A<br>Refer p. 232 Vaughan | 33. E<br>Refer p. 232 Vaughan |
| 34. E<br>Refer p. 232 Vaughan | 35. C<br>Refer p. 233 Vaughan | 36. A<br>Refer p. 233 Vaughan |
| 37. B<br>Refer p. 233 Vaughan | 38. D<br>Refer p. 233 Vaughan | 39. D<br>Refer p. 233 Vaughan |

## **LAST MINUTE POINTS:** **GLAUCOMA**

- Glaucoma is an acquired chronic optic neuropathy characterized by optic disc cupping and visual field loss. It is usually associated with increased IOP.
  - Volume of aqueous humour is 250 ml.
  - Rate of production of aqueous humour is 2.5  $\mu$ L/min.
  - The major mechanism of visual field loss in glaucoma is ganglion cell apoptosis.
  - The most widely used tonometer is Goldmann Applanation Tonometer.
  - Pneumatonometer can be used with a soft contact lens in place, or when the surface of the cornea is irregular.
  - Normal range of IOP is 10-21 mmHg. Elderly up to 24 mm of Kg.
  - Anterior chamber angle is best seen by gonioscopy
- 
- Large myopic eyes have wide anterior chamber angle and the small hyperopic eyes have narrow angles.
  - Glaucomatous optic atrophy is characterized by loss of disc substance, optic disc ratio increase, and disc pallor in the area of cupping.
  - The end result of glaucomatous cupping is called "Bean-Pt cup".
  - Glaucomatous field loss mainly involves the central 30° of field.
  - The earliest change in visual field is baring of blind spot.
  - Visual field defects are not detected until there is about 40% retinal ganglion cell loss.
  - Primary open angle glaucoma is the most common form of glaucoma in blacks and whites.
  - The risk factors for primary angle closure glaucoma are increasing age, female gender, family history and South East Asian origin.
  - Acute angle closure glaucoma is an ophthalmic emergency!
  - The earliest and most common symptom of congenital glaucoma is epiphora.
  - Photophobia and decreased corneal luster also occur.
  - D/D of congenital glaucoma are megalocornea, corneal opacity due to mucopolysaccharidosis or traumatic rupture of Descemet's membrane.
  - Congenital glaucoma is treated by either goniotomy or trabeculectomy.

- Secondary glaucoma can be caused by eveitis, lens dislocation, intumescence of lens, phacolysis, tumors trauma, rubeosis irides, after surgery (ciliary block glaucoma/malignant glaucoma) and Struge Weber syndrome.
- Hyperopic optic disk is small
- Myopic optic cup is large
- Glaucoma :- superior and inferior cupping with focal notching Retinal vessels are displaced nasally
- Central visual quality is not a reliable index of progress of disease.
- Primary open angle glaucoma is associated with myocillie gene ch"10".
- Normmotensive is associated with potineuien gene ch"10".
- Screening for glaucoma
  - Black age 35 (every 2 years)
  - After age 50 (every / year)



## CORNEA

1. The true bacterial corneal pathogen is
  - A. Streptococcus pneumonia
  - B. Staphylococcus aureus
  - C. Moraxella
  - D. Gonococcus
  - E. Pseudomonas
2. Photophobia in corneal disease is the result of
  - A. Associated scleritis
  - B. Painful contraction of iris
  - C. Paralysed iris
  - D. Associated episcleritis
  - E. Associated conjunctivitis
3. the commonest predisposing factor in developed world for corneal ulcer is
  - A. Contact lens wear
  - B. Infections
  - C. Immunosuppressive therapy
  - D. Smoking
  - E. Penetrating trauma
4. "Acute serpiginous-ulcer" is the term used for corneal ulcer caused by
  - A. Pseudomonas
  - B. Herpes simplex
  - C. Acanthamoeba
  - D. Pneumococcus →
  - E. S. aureus
5. If infiltrate and exudates form eye has bluish green colour, it is pathognomic of
  - A. Streptococcal infection
  - B. Pseudomonas infection
  - C. Acanthamoeba infection
  - D. Staphylococcal infection
  - E. Moraxella infection

6. The characteristics of moraxella liquefaciens corneal ulcer are all, except
  - A. Occur in diabetics and alcoholics
  - B. Oval ulcer in inferior cornea
  - C. Usually associated with hypopyon →
  - D. Surrounding cornea is clear
  - E. Occur in immunocompromised host
7. Corticosteroids used in ophthalmology predispose to
  - A. Bacterial corneal ulcer
  - B. Fungal corneal ulcer →
  - C. Acanthamoeba keratitis
  - D. Pseudomonas corneal ulcer
  - E. Episcleritis
8. "Satellite lesion" is the term used for ulcers caused by
  - A. Pseudomonas
  - B. HSV
  - C. VZV
  - D. Fungus →
  - E. Acanthamoeba
9. Corneal abscesses frequently occur in
  - A. Fungal keratitis
  - B. Bacterial corneal ulcer
  - C. Viral corneal ulcer
  - D. Phlyctenular keratitis
  - E. None of above
10. The most common cause of corneal ulceration is
  - A. Pneumococcus
  - B. HSV keratitis
  - C. Fungal keratitis
  - D. Phlyctenular keratitis
  - E. VZV keratitis

11. The most common form of stromal disease in HSV infection is  
 A. Subepithelial keratitis  
 B. Nummular keratitis  
 C. Disciform keratitis →  
 D. Stromal keratitis  
 E. Epithelial keratitis
12. "Dendritic" or "Geographic" ulcer is characteristic presentation of  
 A. HSV keratitis  
 B. Fungal keratitis  
 C. VZV keratitis  
 D. Bacterial keratitis  
 E. Mooren's ulcer
13. "Greatly reduced" or absent corneal sensation is the feature of  
 A. Vitamin A deficiency  
 B. Fungal keratitis  
 C. Pneumococcal keratitis  
 D. HSV keratitis  
 E. Mooren's ulcer
14. As a rule, subepithelial opacities caused by HSV keratitis do not persist for more than  
 A. 3 months  
 B. 6 months  
 C. 1 year →  
 D. 5 years  
 E. These always persist
15. The most prominent sign of disciform keratitis is  
 A. Keratic precipitates  
 B. Scarring  
 C. Vascularisation  
 D. Edema  
 E. Corneal perforation

16. The pathogenesis of disciform keratitis is generally regarded as  
 A. Viral replication  
 B. Immunologic reaction to viral antigens  
 C. Autoimmune  
 D. Idiopathic  
 E. None of the above
17. An effective way to treat dendritic keratitis is  
 A. Topical antivirals  
 B. Oral antivirals  
 C. Topical corticosteroids  
 D. Epithelial debridement  
 E. Systemic corticosteroids
18. Acanthamoeba keratitis is usually associated with  
 A. Contact lens wear  
 B. Immunosuppression  
 C. Foreign body trauma  
 D. Exposure keratitis  
 E. Diabetes mellitus
19. "Pain out of proportion to the clinical findings" is a characteristic feature of  
 A. HSV keratitis  
 B. VZV keratitis  
 C. Acanthamoeba keratitis  
 D. Pseudomonas keratitis  
 E. Phlyctenular keratitis
20. All of the following are the characteristic clinical findings of acanthamoeba keratitis except  
 A. Corneal ulcer  
 B. Stromal ring  
 C. Perineural infiltrates  
 D. A and B only  
 E. All of the above



21. For making the diagnosis of acanthamoeba keratitis, following specimens should be cultured
- Contact lens cases
  - Specimen obtained by corneal biopsy
  - Contact lens solution
  - B and C only
  - All of the above should be cultured

22. Medical treatment of acanthamoeba keratitis is
- Topical propamidine isethionate only
  - Polihexamethylene biguanide only
  - Fortified neomycin eye drops only
  - A is give along with B or C
  - A, B and C should all be given

23. All of the following are characteristics of Mooren's ulcer, except
- A Cause is unknown
  - B Unresponsive to antibiotics and steroids
  - C Occurs most commonly is younger age →
  - D It is marginal ulcer
  - E Unilateral in 60-80% cases

24. Phlyctenules are localized accumulations of
- Lymphocytes
  - Lymphocytes and monocytes
  - Lymphocytes, monocytes and macrophages
  - Lymphocytes, monocytes, macrophages and neutrophils
  - Plasma cells

25. Phlyctenules in phlyctenular keratoconjunctivitis appear first at
- Limbus
  - Upper cornea
  - Lower cornea
  - Temporal conjunctiva
  - Nasal conjunctiva

26. All of the following are characteristics of corneal phlyctenules except
- Often bilateral
  - Cicatrize
  - Vascularized
  - Leave no trace →
  - All are characteristic

27. Phlyctenular keratoconjunctivitis is
- A. Autoimmune in origin
  - B. Immunosuppressive in origin
  - C. Delayed hypersensitivity reaction
  - D. Early allergic response
  - E. None of the above

28. In Pakistan, phlyctenular keratoconjunctivitis may occur in response to
- A. S. aureus
  - B. Tuberculosis →
  - C. Pneumococcal infection
  - D. Syphilis
  - E. Sarcoidosis

29. Untreated phlyctenules spontaneously regress in
- A. 5-10 days
  - B. 2-5 days
  - C. 7-14 days →
  - D. 1-6 months
  - E. Don not regress spontaneously

30. Which one of the following is used to shorten the duration of
- Topical antibacterials
  - Systemic antibiotics
  - Immunosuppressive therapy
  - Topical steroids →
  - Topical antivirals



31. Which one of the following is not the character of typical corneal ulcer associated with vitamin A deficiency?
- Peripherally located
  - Bilateral
  - Gray
  - Indolent
  - Corneal luster is lost
32. Bitot's spots are characteristic of
- A. Vitamin A deficiency
  - B. Hypervitaminosis A
  - C. Vitamin D deficiency
  - D. Trauma
  - E. Leptospirosis infection
33. Bitot's spots occur at
- A. Upper cornea
  - B. Bulbar conjunctiva
  - C. Palpebral conjunctiva
  - D. Inferior cornea
  - E. Lid margin
34. A stained conjunctival scraping from a Bitot's spot will show
- A. Cornebacterium xerosis
  - B. Fungal growth
  - C. Pneumococcus
  - D. HSV
  - E. Mycobacterium fortuitum chelonae
35. The conjunctival and corneal changes due to deficiency of vitamin A together are known as
- A. Xerostomia
  - B. Xerophthalmia
  - C. Keratomalacia
  - D. Bitot's spots
  - E. Sjogren syndrome

36. Mild vitamin A deficiency in adults should be treated with a dose of
- A. 30,000 Units/day for one week
  - B. 10,000 Units/day for one week →
  - C. 50,000 Units/day for one week
  - D. 1,00,000 Units/day for one week
  - E. 2,00,000 Units/day for one week
37. The most effective management of neurotrophic keratitis is
- A. Treat the corneal infection
  - B. Topical steroids
  - C. Keep the eye closed
  - D. Cold compresses
  - E. Warm compresses
38. All of the following are the causes of exposure keratitis except
- A. Exophthalmos
  - B. Ectropion
  - C. Floppy lid syndrome
  - D. Bell's palsy
  - E. Epicanthus →
39. Drug induced epithelial keratitis may occur with all of the following drugs except
- A. Idoxuridine
  - B. Neomycin
  - C. Gentamicin
  - D. Dipivefrin
  - E. Preservatives (benzalkonium chloride)
40. Epithelial filaments in the lower quadrants of cornea are the cardinal signs of
- A. Keratitis of trachoma
  - B. Keratitis of ocular pemphigoid
  - C. Keratitis of sjogren syndrome
  - D. Keratitis of acne roseaceae
  - E. Keratitis of Reiter's syndrome



41. Treatment of keratoconjunctivitis sicca is ✓  
 A. Tears substitutes  
 B. Antibacterials  
 C. Antivirals  
 D. Topical steroids  
 E. Systemic steroids
42. Symptoms of keratoconus appear in  
 A. First decade of life  
 B. Second decade of life  
 C. Third decade of life  
 D. Fourth decade of life  
 E. Fifth decade of life
43. keratoconus has been shown to be associated with all of the following diseases except  
 A. Vernal keratoconjunctivitis  
 B. Down's syndrome  
 C. Atopic dermatitis  
 D. Aniridia  
 E. Sarcoidosis
44. The only symptom of keratoconus is  
 A. Pain  
 B. Photophobia  
 C. Blurred vision  
 D. Floaters  
 E. Irritation
45. Linear narrow folds centrally in Decemet's membrane (Vogt's Lines) are pathognomic of  
 A. Keratoconus  
 B. Band keratopathy  
 C. Fuch's dystrophy  
 D. Terrien's disease  
 E. Salzmann's nodular degeneration

46. In keratoconus, indentation of lower lids by cornea when the patient looks down is called  
 A. Fleischer's sign  
 B. Vogt's sign  
 C. Munson's sign  
 D. Lid lag  
 E. Mayer's sign  
 ANSWER: C ✓
47. Many patients of keratoconus present with ✓  
 A. Myopia  
 B. Hyperopia  
 C. Hyperopia astigmatism  
 D. Myopic astigmatism →  
 E. Presbyopia
48. In management of early stages of keratoconus, which one of the following is prescribed to correct vision?  
 A. Keratoplasty  
 B. Rigid contact lenses →  
 C. Soft contact lenses  
 D. Spectacles  
 E. LASIK
49. Band (calcific) keratopathy is characteristically associated with  
 A. Ankylosing spondylitis  
 B. Bechet's disease  
 C. Juvenile idiopathic arthritis →  
 D. Syphilis  
 E. Tuberculosis
50. Salzmann's nodular degeneration is usually preceded by  
 A. Phlyctenular keratoconjunctivitis →  
 B. Superior limbic keratoconjunctivitis  
 C. Thyroid eye disease  
 D. Vernal catarrh  
 E. Atopic conjunctivitis



51. Prevalence of arcus senilis is strongly associated with

- A. Diabetes
- B. Low socio-economic status
- C. Age
- D. Alcoholics
- E. Smoking

✓ in 3/4 of cases

52.

Which of the following tests should be performed if arcus senilis is observed in a subject aged less than 50?

- A. RBS
- B. UCE (Urea, creatinine, electrolytes)
- C. Blood CP
- D. Lipid profile
- E. LFTs

✓ in 3/4 of cases

53.

Which one of the following is not the epithelial dystrophy

- A. Meesman's dystrophy
- B. Epithelial basement membrane dystrophy
- C. Reis Buckler dystrophy
- D. Vortex dystrophy
- E. Fuch's dystrophy

✓

54. Drug like amiodarone, chlorpromazine, and chloroquine may cause which one of the following dystrophies?

- A. Meesman's dystrophy
- B. Epithelial basement membrane dystrophy
- C. Reis Buckler dystrophy
- D. Vortex dystrophy
- E. Fuch's dystrophy

✓

55. Amyloid deposits in the collagen fibres of cornea are found in

- A. Granular dystrophy
- B. Lattice dystrophy
- C. Macular dystrophy
- D. Fuch's dystrophy
- E. Vortex dystrophy

56. Uniform deposition of hyaline material in stroma of cornea is characteristic of

- A. Granular dystrophy
- B. Lattice dystrophy
- C. Macular dystrophy
- D. Fuch's dystrophy
- E. Vortex dystrophy

✓

57. Thinning and pigmentation of endothelium and thickening of decemet's membrane are characteristic of

- A. Granular dystrophy
- B. Lattice dystrophy
- C. Macular dystrophy
- D. Fuch's dystrophy
- E. Vortex dystrophy

✓

58.

Stocker's line is associated with

- A. Fuch's dystrophy
- B. Congenital syphilis
- C. Pterygium
- D. Hepatolenticular degeneration
- E. Aging

✓



**CORNEA****ANSWERS AND REFERENCES**

- |                      |                      |                      |
|----------------------|----------------------|----------------------|
| 1. A                 | 2. B                 | 3. A                 |
| Refer p. 120 Vaughan | Refer p. 120 Vaughan | Refer p. 123 Vaughan |
| 4. D                 | 5. B                 | 6. C                 |
| Refer p. 123 Vaughan | Refer p. 123 Vaughan | Refer p. 124 Vaughan |
| 7. B                 | 8. D                 | 9. A                 |
| Refer p. 126 Vaughan | Refer p. 126 Vaughan | Refer p. 126 Vaughan |
| 10. B                | 11. C                | 12. A                |
| Refer p. 127 Vaughan | Refer p. 128 Vaughan | Refer p. 127 Vaughan |
| 13. D                | 14. C                | 15. D                |
| Refer p. 127 Vaughan | Refer p. 128 Vaughan | Refer p. 128 Vaughan |
| 16. B                | 17. D                | 18. A                |
| Refer p. 128 Vaughan | Refer p. 128 Vaughan | Refer p. 130 Vaughan |
| 19. C                | 20. E                | 21. E                |
| Refer p. 130 Vaughan | Refer p. 130 Vaughan | Refer p. 130 Vaughan |
| 22. D                | 23. C                | 24. D                |
| Refer p. 130 Vaughan | Refer p. 131 Vaughan | Refer p. 131 Vaughan |
| 25. A                | 26. D                | 27. C                |
| Refer p. 131 Vaughan | Refer p. 131 Vaughan | Refer p. 137 Vaughan |
| 28. B                | 29. C                | 30. D                |
| Refer p. 131 Vaughan | Refer p. 131 Vaughan | Refer p. 131 Vaughan |
| 31. A                | 32. A                | 33. B                |
| Refer p. 132 Vaughan | Refer p. 132 Vaughan | Refer p. 132 Vaughan |
| 34. A                | 35. B                | 36. B                |
| Refer p. 132 Vaughan | Refer p. 132 Vaughan | Refer p. 132 Vaughan |
| 37. A                | 38. E                | 39. D                |
| Refer p. 133 Vaughan | Refer p. 133 Vaughan | Refer p. 133 Vaughan |
| 40. C                | 41. A                | 42. B                |
| Refer p. 134 Vaughan | Refer p. 134 Vaughan | Refer p. 134 Vaughan |

- |                      |                      |                      |
|----------------------|----------------------|----------------------|
| 43. E                | 44. C                | 45. A                |
| Refer p. 134 Vaughan | Refer p. 134 Vaughan | Refer p. 134 Vaughan |
| 46. C                | 47. D                | 48. B                |
| Refer p. 134 Vaughan | Refer p. 134 Vaughan | Refer p. 134 Vaughan |
| 49. C                | 50. A                | 51. C                |
| Refer p. 135 Vaughan | Refer p. 136 Vaughan | Refer p. 136 Vaughan |
| 52. D                | 53. E                | 54. D                |
| Refer p. 136 Vaughan | Refer p. 137 Vaughan | Refer p. 137 Vaughan |
| 55. B                | 56. A                | 57. D                |
| Refer p. 137 Vaughan | Refer p. 137 Vaughan | Refer p. 137 Vaughan |
| 58. C                |                      |                      |
| Refer p. 140 Vaughan |                      |                      |



## LAST MINUTE POINTS:

### CORNEA

- The transparency of cornea is due to its uniform structure, avascularity and deturgescence.
- Photophobia (severe in most corneal disease) is minimal in Herpetic Keratitis because of the hyposthaesia associated with the disease which is a valuable diagnostic sign.
- Slit lamp examination is essential for proper examination of cornea.
- PCR may provide rapid identification of viruses, fungi and acanthamoeba.
- Epidemic keratoconjunctivitis caused by adenovirus 8 and 19 is characterized by grossly visible subepithelial opacities.
- Infectious ulcers are usually central.
- Contact lens wear keratitis may occur with pseudomonas and acanthamoeba.

Bluish green exudates is pathognomonic of pseudomonas aeruginosa.

Mycobacterium fortuitum-choleci and nocardial corneal ulcer follow trauma and characterized by indolent "cracked windshield ulcer".

Gungla keratitis is seen most commonly in agricultural countries and is characterized by superficial ulceration with satellite lesions.

Corneal abscesses frequently occur in fungal keratitis.

Herpes simplex keratitis is the most common cause of corneal ulceration. It occurs mostly due to HSV 1 characterized by dendritic and geographic ulcers and decreased corneal sensation.

Herpes simplex keratitis is treated by debride ment and acyclovir 5 times/day.

Acanthamoeba keratitis occurs with both rigid and soft contact lens use and is characterized by pain out of proportion to clinical findings, redness and photophobia.

Non-infectious corneal ulcers are marginal infiltrates and ulcers, Mooren's ulcer, ulcer due to vitamin A deficiency, neurotrophic keratitis and exposure keratitis.

Epithelial filaments in the lower quadrants characterized by pathognomonic "dog's lines" on Descemet's membrane. Bluish red vision is the only symptom. It

- is treated by rigid contact lens and is the most common indication for corneal transplantation (keratoplasty).
- Bandk (calcific) Keratopathy is characteristically associated with JIA. It may also be associated with hyperparathyroidism, vitamin D intoxication, sarcoidosis and leprosy.
- Arcus senilis is extremely common, bilateral, benign peripheral corneal degeneration. Its prevalence is strongly associated with age.
- Arcus senilis produces no symptoms. No treatment is necessary and there are no complications.
- Hutchinson's triad comprises interstitial keratitis, notched upper central incisors and deafness.
- Therapeutic soft contact lenses are used for providing protection against trichiasis, exposure and recurrent corneal erosions and bullous keratopathy.
- Classic example of opportunist bacterial corneal pathogen is *Mycobacterium*, common in alcoholics.
- Pseudomonas, Acanthamoeba keratitis occurs due to contact lens wear.
- Disciform keratitis is a form of stromal disease which is self-limited.
- HSV keratitis, recurrence is unilateral.
- Mild vit A deficiency in children should be treated with a dose of 1500-5000 IU.



# CONJUNCTIVA

- Which one of the following is the most common eye disease worldwide?
  - Scleritis
  - Keratitis
  - Conjunctivitis ✓
  - Episcleritis
  - Uveitis
- In which of the following coriunctivitis neutrophils and lymphocytes are usually present in equal number?
  - Viral conjunctivitis
  - Bacterial conjunctivitis
  - Allergic conjunctivitis
  - Chlamydial conjunctivitis ✓
  - None of the above
- Symptoms of conjunctivitis are
  - Foreign body sensation
  - Scratching or burning sensation
  - Sensation of fullness around eyes
  - Photophobia
  - All of above
- The most conspicuous clinical sign of acute conjunctivitis is
  - Hyperaemia ✓
  - Tearing
  - Exudation
  - Papillary hypertrophy
  - Follicles
- An abnormally scant secretion of tears and increase in mucous threads suggests
  - Bacterial conjunctivitis
  - Keratoconjunctivitis ✓
  - Viral conjunctivitis
  - Chlamydial conjunctivitis
  - Allergic conjunctivitis

- A velvety red tarsal conjunctiva is characteristic of
  - Bacterial conjunctivitis
  - Allergic conjunctivitis
  - Acute trachoma —
  - Viral conjunctivitis
  - Keratoconjunctivitis sicca
- Limbal papillae are characteristic of
  - Vernal conjunctivitis ✓
  - Acute trachoma
  - Viral conjunctivitis
  - Keratoconjunctivitis sicca
  - Atopic conjunctivitis
- Chemosis of conjunctiva strongly suggests
  - Trachoma infection
  - Allergic conjunctivitis ✓
  - Acute gonococcal infection
  - Acute meningococcal
  - Viral conjunctivitis
- Follicles in conjunctiva are seen in
  - Viral conjunctivitis
  - Chlamydial conjunctivitis —
  - Drug induced conjunctivitis
  - Parasitic conjunctivitis
  - All of above

43/840028
- Acute bacterial conjunctivitis is self limited lasting no more than
  - 7 days
  - 10 days
  - 5 days
  - 14 days ✓
  - 3 days



11. **Gonococcus and meningococcus causes**
- Acute mucopurulent conjunctivitis
  - Hyperacute purulent conjunctivitis
  - Subacute conjunctivitis
  - Chronic bacterial conjunctivitis
  - Do not cause conjunctivitis
12. **Which of the following conjunctivitis causes serious intra-cranial complications and septicemia?**
- Meningococcal and gonococcal conjunctivitis
  - Viral conjunctivitis
  - Pneumococcal conjunctivitis
  - Trachomatous conjunctivitis
  - Influenza conjunctivitis
13. **Which of the following conjunctivitis occurs in epidemic form?**
- Hyperacute conjunctivitis
  - Subacute conjunctivitis
  - Chronic conjunctivitis
  - Acute mucopurulent conjunctivitis
  - Allergic conjunctivitis
14. **Patients with an lacrimal duct obstruction are prone to develop**
- Hyperacute conjunctivitis
  - Subacute conjunctivitis
  - Chronic bacterial conjunctivitis
  - Acute bacterial conjunctivitis
  - Allergic conjunctivitis
15. **Complications of gonococcal conjunctivitis are**
- Septicaemia
  - Meningitis
  - Marginal corneal ulceration
  - Toxic iritis
  - All of the above

16. **The treatment of gonococcal conjunctivitis restricted to conjunctiva is**
- Topical polymyxin-trimethoprim
  - Single IM dose of ceftriaxone ✓
  - 5 day course of IM ceftriaxone
  - No treatment is required
  - Topical steroids only
17. **Treatment of gonococcal conjunctivitis involving cornea is**
- Topical polymyxin-trimethoprim
  - Single IM dose of ceftriaxone
  - 5 day course of IM ceftriaxone ✓
  - No treatment is required
  - Topical steroids only
18. **Incubation period of trachoma averages**
- 3 days
  - 7 days ✓
  - 21 days
  - 28 days
  - 1 year
19. **"Herbert's Pits" are pathognomic of**
- Trachoma ✓
  - Inclusion conjunctivitis
  - Lymphogranuloma venereum
  - Viral conjunctivitis
  - Allergic conjunctivitis
20. **"Herbert's Pits" are**
- Active follicles
  - Focal corneal opacities
  - Cicatricial remains of follicles ✓
  - Papillary hypertrophy
  - None of above



21. The final blinding lesion of trachoma is

- A. Conjunctival scarring
- B. Corneal opacity
- C. Trichiasis
- D. Papillary hypertrophy
- E. Optic nerve damage

Handwritten: "N-P" with an arrow pointing to option B.

22. Complications of trachoma are all except

- A. Conjunctival scarring
- B. Corneal scarring
- C. Ptosis
- D. Nasolacrimal duct obstruction
- E. Toxic iritis

23. Drug of choice for trachoma now-a-days is

- A. Erythromycin
- B. Tetracycline
- C. Azithromycin
- D. Ceftriaxone
- E. Ciprofloxacin

24. Which one of the following is incorrect regarding inclusion conjunctivitis

- A. It is caused by C. Trachomatis serotypes D-K
- B. It is often bilateral
- C. It usually occurs in sexually active young people
- D. 1% silver nitrate prophylactically gives complete protection
- E. 1% silver nitrate prophylactically gives partial protection

25. The average duration of untreated inclusion conjunctivitis is

- A. 3 months
- B. 5 months
- C. 9 months
- D. 12 months
- E. 1 months

26. All of the following are acute follicular viral conjunctivitis except

- A. It is caused by Adenovirus type 3, 4 and 7
- B. Follicles are prominent on both conjunctiva
- C. Tender preauricular lymphadenopathy is characteristic
- D. Non-tender preauricular lymphadenopathy is characteristic
- E. Conjunctivitis is self limited

28. About epidemic keratoconjunctivitis, all are true except

- A. It is caused by Adenovirus type 8, 19, 29 and 37
- B. It is usually bilateral
- C. Tender preauricular lymphadenopathy is characteristic
- D. Nosocomial transmission during eye examination
- E. Non-tender preauricular lymphadenopathy is characteristic

29. Acute hemorrhagic conjunctivitis is usually caused by

- A. Adeno virus
- B. Enterovirus type 70
- C. VZV
- D. HSV
- E. Rickettsiae

30. "Butcher's conjunctivitis" is caused by

- A. Ascaris lumbricoides
- B. Loa loa
- C. Taenia solium
- D. Trichinella spiralis
- E. Candida albicans

31. Treatment of butcher's conjunctivitis is

- A. Diethylcarbamazine
- B. Irrigation of conjunctival sac
- C. Steroids
- D. Antibacterials
- E. Antifungals

32. When the patient states that "eyes seem to be sinking into surrounding tissue", what comes to your mind?

- A. Bacterial conjunctivitis
- B. Viral conjunctivitis
- C. Hay fever conjunctivitis
- D. Chlamydial conjunctivitis
- E. Atopic keratoconjunctivitis

33. Itching of eyes is severe in

- A. Viral conjunctivitis
- B. Bacterial conjunctivitis
- C. Chlamydial conjunctivitis
- D. Phlyctenular conjunctivitis
- E. Allergic conjunctivitis

34. Tearing is profuse in

- A. Viral conjunctivitis
- B. Bacterial conjunctivitis
- C. Chlamydial conjunctivitis
- D. Phlyctenular conjunctivitis
- E. Allergic conjunctivitis

35. When patient complains of extreme itching and ropy discharge, which type of conjunctivitis comes to your mind?

- A. Hay fever conjunctivitis
- B. Atopic conjunctivitis
- C. Viral conjunctivitis
- D. Chlamydial conjunctivitis
- E. Vernal catarrh

36. Pseudogerontoxon (arcus like haze) is often noted in

- A. Hay fever conjunctivitis
- B. Vernal catarrh
- C. Viral conjunctivitis
- D. Chlamydial conjunctivitis
- E. Atopic conjunctivitis

37. Vernal catarrh may be associated with

- A. Aniridia
- B. Thyroid dysfunction
- C. Keratoconus
- D. Pituitary dysfunction
- E. Argyl-Robertson pupil

38. The best treatment option for vernal catarrh is

- A. Vasoconstrictors
- B. Cold compresses
- C. Move the patient to cool moist climate
- D. Warm compresses
- E. Plasmapheresis

39. Chronic topical therapy with mast cell stabilizer is the mainstay in the treatment of

- A. Vernal keratoconjunctivitis
- B. Hay fever conjunctivitis
- C. Giant papillary conjunctivitis
- D. Atopic keratoconjunctivitis
- E. Viral conjunctivitis

40. Phlyctenulosis responds dramatically to

- A. Antibacterials
- B. Antivirals Antihistamines
- C. Vasoconstrictors
- D. Topical corticosteroids

41. Iatrogenic conjunctivitis may occur with

- A. Dipivefrin
- B. Miotics
- C. Neomycin
- D. Silver nitrate
- E. All of the above



42. Symblepharon and corneal scarring are more likely to occur if the agent that enters conjunctivitis sac is

- A. Neutral
- B. Smoke
- C. Alkali
- D. Ferrous body
- E. Acid

43. The most important step in the treatment of chemical injury to eye is

- A. Immediate use of chemical antidotes
- B. Use of steroids in first step
- C. Immediate irrigation with water
- D. Patching of eye
- E. Use of analgesics

44. Which one of the following is true regarding superior limbic keratoconjunctivitis?

- A. 50% of cases are associated with thyroid dysfunction
- B. Usually bilateral
- C. Usually limited to upper tarsus
- D. Rose Bengal staining is helpful diagnostic test
- E. All of the above

45. Patients with which one of the following diseases often complain of "hot eye" during attack?

- A. Sudden rise in BP
- B. Gout
- C. Carcinoid conjunctivitis
- D. Both B and C
- E. All of the above

46. Which of the following pathogens cause canaliculitis?

- A. Mucor and rhizopus
- B. Candida and aspergillus
- C. Histoplasma
- D. Sporothrix
- E. Cornebacterium xerosis

47. The nodules of pinguecula and pterygium are composed of

- A. Collagen type I
- B. Proteoglycans
- C. Limbal blood vessels
- D. Mucopolysaccharides
- E. Hyaline and yellow elastic tissue

48. The most common cause of parinaud's Oculoglandular Syndrome is

- A. Cystinosis
- B. Climatic Droplet Keratopathy
- C. Cat-scratch disease
- D. Inclusion blennorhea
- E. Ligneous conjunctivitis

49. Ligneous conjunctivitis is due to the deficiency of

- A. Type I plasminogen
- B. PAF
- C. Antithrombin III
- D. Complement system
- E. Helper-T cells



# CONJUNCTIVA

## ANSWERS AND REFERENCES

1. C Refer p. 83 Vaughan
2. D Refer p. 83 Vaughan
3. E Refer p. 85 Vaughan
4. A Refer p. 85 Vaughan
5. B Refer p. 85 Vaughan
6. C Refer p. 88 Vaughan
7. A Refer p. 88 Vaughan
8. B Refer p. 88 Vaughan
9. E Refer p. 88 Vaughan
10. D Refer p. 88 Vaughan
11. B Refer p. 87 Vaughan
12. A Refer p. 87 Vaughan
13. D Refer p. 87 Vaughan
14. C Refer p. 87 Vaughan
15. E Refer p. 87 Vaughan
16. B Refer p. 87 Vaughan
17. C Refer p. 87 Vaughan
18. B Refer p. 88 Vaughan
19. A Refer p. 88 Vaughan
20. C Refer p. 88 Vaughan
21. B Refer p. 88 Vaughan
22. E Refer p. 88 Vaughan
23. C Refer p. 88 Vaughan
24. D Refer p. 90 Vaughan
25. B Refer p. 90 Vaughan
26. E Refer p. 91 Vaughan
27. C Refer p. 91 Vaughan
28. E Refer p. 92 Vaughan
29. B Refer p. 94 Vaughan
30. A Refer p. 96 Vaughan
31. A Refer p. 96 Vaughan
32. C Refer p. 97 Vaughan
33. E Refer p. 97 Vaughan
34. A Refer p. 97 Vaughan
35. E Refer p. 97 Vaughan
36. B Refer p. 97 Vaughan
37. C Refer p. 97 Vaughan
38. C Refer p. 97 Vaughan
39. D Refer p. 98 Vaughan
40. E Refer p. 99 Vaughan
41. E Refer p. 102 Vaughan
42. C Refer p. 102 Vaughan

43. C Refer p. 102 Vaughan
44. E Refer p. 104 Vaughan
45. D Refer p. 106 Vaughan
46. B Refer p. 106 Vaughan
47. E Refer p. 106 Vaughan
48. C Refer p. 108 Vaughan
49. A Refer p. 105 Vaughan



## LAST MINUTE POINTS: CONJUNCTIVA

- The important symptoms of conjunctivitis are foreign body sensation, scratching or burning, sensation of fullness around the eyes, itching and photophobia.
- Hyperaemia is the most conspicuous clinical sign of acute conjunctivitis
- Follicles are seen in most cases of viral conjunctivitis and in all cases of Chlamydia conjunctivitis except neonatal inclusion conjunctivitis.
- Pseudomembrane or membranes may accompany epidemic keratoconjunctivitis, primary herpes simplex conjunctivitis, streptococcal conjunctivitis, cicatricial pephthoid and erythema multiforme major.
- Phytanules represent a delayed hypersensitivity reaction to microbial antigens. Staphylococcal in developed countries and mycobacteria in developing.
- Large tender preauricular node is a sign of primary HSV conjunctivitis, epidemic keratoconjunctivitis and tracho conjunctivitis.
- Small (nontender) preauricular lymph node is seen in pharyngoconjunctival fever, and acute hemorrhagic conjunctivitis.
- Herbert's pits are pathognomic of trachoma.
- Corneal opacity is final blinding lesion of trachoma.
- Conjunctival scarring is frequent complication of trachoma.
- 1 gram azithromycin is the drug of choice for trachoma.
- Inclusion conjunctivitis is often bilateral and usually occurs in sexually active young people that can be prevented by Crede prophylaxis (1% silver nitrate)
- Pharyngoconjunctival fever is characterized by follicles on both the conjunctiva and pharyngeal mucosa.
- Trantas dots are whitish dots seen at the limbus in some patients with vernal keratoconjunctivitis.
- Drugs causing follicular conjunctivitis are dipivefrin, miotics, idoxuridine, meomycin, and silver nitrate.
- Alkali causes more and persistent damage to eyes than acids.
- The most effective and initial treatment of chemical burns is irrigation with water or normal saline solution.
- Pinguecula are extremely common in adults. They appear as yellow nodules on nasal side of cornea and the palpebral aperture. In general no treatment is required.

- Pterygium is a fleshy triangular encroachment of pinguecula on the cornea. It arises due to exposure to UV light, drying and windy environment.
- Both pinguecula and pterygium are composed of hyaline and yellow elastic tissue.
- Inclusion blepharitis is neonatal conjunctivitis caused by Chlamydia.
- In both gonococcal and chlamydial conjunctivitis, the parents need to be treated.
- The most common cause of Parinaud's oculoglandular syndrome is Cat Scratch disease.



# UVEAL TRACT & SCLERA

1. Uveal tract consists of
    - A. Choroid
    - B. Ciliary body
    - C. Iris
    - D. All of the above
    - E. Only B and C
  2. Which of the following subtype of uveitis is most common? ✓
    - A. Anterior uveitis
    - B. Intermediate uveitis
    - C. Posterior uveitis
    - D. Panuveitis
    - E. All have almost equal incidence
  3. Typical symptoms of anterior uveitis are
    - A. Pain
    - B. Photophobia
    - C. Blurred vision
    - D. Redness
    - E. All of the above

✓ Redness
- Inflammation involving both the anterior chamber and anterior vitreous is often referred to as
- A. Panuveitis
  - B. Pars planitis
  - C. Cyclitis
  - D. Peripheral uveitis
  - E. Iridocyclitis

5. When "iris nodules" are present on the iris margin, they are termed
  - A. Busacca nodules
  - B. Koeppe nodules
  - C. Berlin's nodules
  - D. Arlt's nodules
  - E. Lisch nodules
7. When "iris nodules" are located at the anterior chamber angle, they are termed
  - A. Busacca nodules
  - B. Koeppe nodules
  - C. Berlin's nodules
  - D. Arlt's nodules
  - E. Lisch nodules
8. The most common cause of hypopyon uveitis in Asia is
  - A. Behcet's disease
  - B. HLA-B 27 associated uveitis
  - C. Leptospirosis
  - D. Tuberculosis
  - E. Syphilis
9. The most common cause of hypopyon uveitis in North America and Zuope is
  - A. Behcet's disease
  - B. HLA-B 27 associated uveitis
  - C. Leptospirosis
  - D. Tuberculosis
  - E. Syphilis



10. The most common cause of hypopyon uveitis in agricultural communities is

- A. Behcet's disease
- B. HLA-B 27 associated uveitis
- C. Leptospirosis
- D. Tuberculosis
- E. Syphilis

11. The hallmark of intermediate uveitis is

- A. Retinal vasculitis
- B. Ciliary body inflammation
- C. Floaters
- D. Blurred vision
- E. Vitreous inflammation

12. Typical symptoms of intermediate uveitis are

- A. Pain and floaters
- B. Photophobia and blurred vision
- C. Pain and blurred vision
- D. Floaters and blurred vision
- E. Pain and redness

13. The cause of intermediate uveitis in most of the patients is

- A. Sarcoidosis
- B. Multiple sclerosis
- C. Tuberculosis
- D. Syphilis
- E. Unknown

14. Most common complication/s of intermediate uveitis is/are

- A. Cystoids macular edema
- B. Retinal vasculitis
- C. Neovascularisation of optic disc
- D. All of these
- E. Only A and C

15. All of the following are complications of uveitis except

- A. Cataract
- B. Glaucoma
- C. Cystoids macular edema
- D. Retinal detachment
- E. Vitreous hemorrhage

16. Which of the following drugs are the mainstay of treatment for uveitis?

- A. Antibacterials and cycloplegics
- B. Antibacterials and corticosteroids
- C. Corticosteroids and cycloplegics/mydriatics
- D. Corticosteroids
- E. Cycloplegics

17. Anterior uveitis may be associated with

- A. Juvenile idiopathic arthritis
- B. Ankylosing spondylitis
- C. Fuch's heterochromatic cyclitis
- D. Lens-induced uveitis
- E. All of the above

18. Patients with Fuch's uveitis syndrome usually complain of blurred vision due to

- A. Glaucoma
- B. Cataract
- C. Optic nerve damage
- D. Retinitis
- E. Corneal opacity

19. The most common causes of decreased vision in intermediate uveitis are

- A. Posterior subcapsular cataract
- B. Cystoids macular edema
- C. Optic atrophy
- D. A and B
- E. None of these



4. Most common cause of retinitis in immunocompetent host is

- ☒ A. Toxoplasmosis  
 B. Syphilis  
 C. Behcet's disease  
 D. Sarcoidosis  
 E. Tuberculosis

21. The most common cause of choroiditis is

- ☒ A. Sarcoidosis  
 B. Tuberculosis  
 C. Toxoplasmosis  
 D. Vogt Koyanagi Harada syndrome  
 E. Behcet's disease

22. In the age group 4-5, the most common causes of posterior uveitis are

- ☒ A. CMV and Syphilis  
 B. Toxoplasmosis and toxocariasis  
 C. Sarcoidosis & Behcet's syndrome  
 D. HSV & VZV  
 E. None of these

23. "Salt and pepper retinopathy" is the term used for retinal infections caused by

- ☒ A. Rubella and Rubella  
 B. Toxoplasmosis  
 C. Tuberculosis uveitis  
 D. Syphilis

24. "Punched-out" spots in posterior spots are seen in

- ☒ A. Toxoplasmosis  
 B. Toxocariasis  
 C. Histoplasmosis  
 D. Syphilis  
 E. AIDS

25. Which one of the following infections may present as "Leukocoria"?

- ☒ A. Toxoplasmosis  
 B. Toxocariasis  
 C. Tuberculosis uveitis  
 D. Histoplasmosis  
 E. AIDS

26. Sympathetic ophthalmia results due to

- ☒ A. Perforating eye injury  
 B. Severe bacterial infection  
 C. Severe viral infection  
 D. Severe autoimmune reaction  
 E. Sympathetic nervous overstimulation

27. The recommended treatment of severely injured sightless eye is

- ☒ A. Enucleation within 1 year after injury  
 B. Enucleation within 10 days after injury  
 C. High dose corticosteroids  
 D. IV antibiotics  
 E. Antivirals

28. The most common primary intraocular malignant tumor is

- ☒ A. Choroidal melanoma  
 B. Hemangioma  
 C. Retinoblastoma  
 D. Neurofibroma  
 E. Rhabdomyosarcoma

29. The most common intraocular tumor is

- ☒ F. Choroidal melanoma  
 G. Hemangioma  
 H. Retinoblastoma  
 I. Neurofibroma  
 J. Rhabdomyosarcoma



30. Blue sclera can be seen with
- Osteogenesis imperfect
  - Keratoconus/keratoglobus
  - Ehlers-Danlos Syndrome
  - Marfan's Syndrome
  - All of the above ✓

31. Anterior staphylomas are generally located
- Anterior to ciliary body
  - Posterior to ciliary body
  - Over the ciliary body →
  - At the equator
  - Near the optic disc

32. Posterior staphylomas are most commonly seen
- Near the macula
  - Near the optic nerve →
  - Just posterior to lens
  - Posterior to ciliary body
  - Equator

33. Posterior staphylomas may be associated with
- Extreme myopia
  - Central coloboma of optic nerve head
  - Extreme hyperopia
  - Subretinal neovascularisation →
  - None of above

34. The most common cause of episcleritis is
- Idiopathic ✓
  - Bacterial
  - Viral
  - Allergic
  - Autoimmune
- MM  
BRUNNELL

35. Which of the following is not true regarding episcleritis?
- Symptoms are redness and mild irritation
  - Recurrence is the rule
  - Affects young people
  - Is usually benign
  - More common in men than in women →

36. Scleromalacia perforans is almost always associated with
- Polyarteritis nodosa
  - Sarcoidosis
  - Rheumatoid arthritis →
  - Wegener's granulomatosis
  - SLE

37. Initial treatment of scleritis is with
- Topical steroids
  - Systemic NSAIDs →
  - Cyclophosphamide
  - Antibiotics
  - Immunosuppressants

#### KEY POINTS:-

- Inflammation limited to the anterior chamber is called "iritis".
- Intermediate uveitis is the second most common type of intra ocular inflammation.
- Man are affected more commonly than the women. It is often bilateral.
- Cystoid macular edema is a common cause of visual loss, in patients with uveitis and may or intermediate uveitis.
- In histoplasmosis, patients usually have a punched out spot and a positive skin treat to histoplasmin. Without treatment the disease progress and leads to complete bilateral blindness is severely injured eye.
- Intercal any staphylococci located b/w the ciliary body & limbus.



## UVEAL TRACT & SCLERA

### ANSWERS AND REFERENCES

- |   |  |
|---|--|
| <p>1. <b>D</b><br/>Refer p. 145 Vaughan</p> <p>4. <b>E</b><br/>Refer p. 145 Vaughan</p> <p>7. <b>C</b><br/>Refer p. 145 Vaughan</p> <p>10. <b>C</b><br/>Refer p. 146 Vaughan</p> <p>13. <b>E</b><br/>Refer p. 146 Vaughan</p> <p>16. <b>C</b><br/>Refer p. 148 Vaughan</p> <p>19. <b>D</b><br/>Refer p. 151 Vaughan</p> <p>22. <b>B</b><br/>Refer p. 152 Vaughan</p> <p>25. <b>B</b><br/>Refer p. 154 Vaughan</p> <p>28. <b>A</b><br/>Refer p. 158 Vaughan</p> <p>31. <b>C</b><br/>Refer p. 171 Vaughan</p> <p>34. <b>A</b><br/>Refer p. 167 Vaughan</p> <p>37. <b>B</b><br/>Refer p. 167 Vaughan</p> | <p>2. <b>A</b><br/>Refer p. 145 Vaughan</p> <p>5. <b>B</b><br/>Refer p. 145 Vaughan</p> <p>8. <b>A</b><br/>Refer p. 146 Vaughan</p> <p>11. <b>E</b><br/>Refer p. 146 Vaughan</p> <p>14. <b>D</b><br/>Refer p. 146 Vaughan</p> <p>17. <b>E</b><br/>Refer p. 149 Vaughan</p> <p>20. <b>A</b><br/>Refer p. 153 Vaughan</p> <p>23. <b>A</b><br/>Refer p. 152 Vaughan</p> <p>26. <b>A</b><br/>Refer p. 156 Vaughan</p> <p>29. <b>B</b><br/>Refer p. 159 Vaughan</p> <p>32. <b>B</b><br/>Refer p. 171 Vaughan</p> <p>35. <b>E</b><br/>Refer p. 167 Vaughan</p> <p>3. <b>D</b><br/>Refer p. 145 Vaughan</p> <p>6. <b>A</b><br/>Refer p. 145 Vaughan</p> <p>9. <b>B</b><br/>Refer p. 146 Vaughan</p> <p>12. <b>D</b><br/>Refer p. 146 Vaughan</p> <p>15. <b>E</b><br/>Refer p. 148 Vaughan</p> <p>18. <b>B</b><br/>Refer p. 150 Vaughan</p> <p>21. <b>A</b><br/>Refer p. 155 Vaughan</p> <p>24. <b>C</b><br/>Refer p. 154 Vaughan</p> <p>27. <b>B</b><br/>Refer p. 156 Vaughan</p> <p>30. <b>E</b><br/>Old Edition</p> <p>33. <b>D</b><br/>Refer p. 171 Vaughan</p> <p>36. <b>C</b><br/>Refer p. 168 Vaughan</p> |
|---|--|

### KEY POINTS:-

- Staphylococci is the building of the area into ectopic sclera.
- Episcleritis effect women 3 items more as compared to men it is unilateral about 2 / 3rd of cases
- Sclera thinning is associated with inflammation.

## LIDS, LACRIMAL APPARATUS & TEARS

1. Moll's glands of eye lids are
  - A. Modified sebaceous glands
  - B. Modified sweat glands
  - C. Endocrine glands
  - D. Abnormal glands
  - E. Situated on the posterior aspect of eye lids
2. The term "sty" (external hordeolum) is used when there is an infection of
  - A. Meibomian glands only
  - B. Zeis's glands only
  - C. Moll's glands only
  - D. Both A and B
  - E. Both C and D
3. Most hordeola are caused by
  - A. Streptococcal infection
  - B. S. aureus
  - C. S. epidermis
  - D. Viral in origin
  - E. S. saprophytic us
4. Infection of meibomian glands is called
  - A. Sty
  - B. External hordeolum
  - C. Internal hordeolum
  - D. Blepharitis
  - E. Chalazion
5. Idiopathic sterile chronic granulomatous inflammation of meibomian gland is called
  - A. Sty
  - B. External hordeolum
  - C. Internal hordeolum
  - D. Blepharitis
  - E. Chalazion



6. If chalazion is sufficiently enlarged, it may cause

- Myopia
- Hyperopia
- Amblyopia
- Astigmatism -
- Presbyopia

an amblyopia

7. Definite treatment of chalazion is

- A. Vertical incision into tarsal gland
- B. Horizontal incision into tarsal gland
- C. Warm compresses
- D. Intralesional steroids
- E. Immunosuppressants

8. Inflammation of eye lids secondary to dysfunction of meibomian glands is called

- A. Anterior blepharitis
- B. Posterior blepharitis
- C. Chalazion
- D. Hordeolum
- E. Ectropion

9. Gross changes of posterior blepharitis are identical to the ocular findings in

- A. Acne rosacea
- B. Behcet's disease
- C. Reiter's disease
- D. Ankylosing spondylitis
- E. Scleroderma

10. Which one of the following is the most common subtype of entropion?

- A. Cicatricial
- B. Congenital
- C. Epiblepharom
- D. Involutional entropion
- E. None of these

11. Cicatricial entropion is most often found with

- A. Trauma
- B. Bacterial infection
- C. Tachoma
- D. Viral infection
- E. Allergic infection

12. Trichiasis is

- A. Impingement of eye lashes on conjunctiva
- B. Accessory eye lashes
- C. Outward turning of eye lashes
- D. Impingement of eye lashes on cornea
- E. None of above

Distichiasis

13. Ectropion is

- A. Eversion of lower lid
- B. Sagging and eversion of upper lid
- C. Sagging and eversion of lower lid
- D. Inversion of lower lid
- E. Inversion of upper lid

ectropion

14. Coloboma is a result of

- A. Complete fusion of fetal maxillary processes
- B. Bulging of uvea into ectatic sclera
- C. Vertical folds of skin over medial canthi
- D. Loss of pigmentation of iris
- E. Incomplete fusion of fetal maxillary processes

15. Which one of the following sites is most commonly involved in congenital coloboma?

- A. Medial aspect of upper lid
- B. Medial aspect of lower lid
- C. Lateral aspect of upper lid
- D. Lateral aspect of lower lid
- E. All of the above



✓ 16. Epicanthus is characterized by

- A. Horizontal fold of skin over medial canthi
- B. Vertical fold of skin over lateral canthi
- C. Vertical fold of skin over medial canthi
- D. Horizontal fold of skin over lateral canthi
- E. None of the above

✓ 17. Which one of the following cause pseudoesotropia?

- A. Coloboma
- B. Ectropion
- C. Epicanthus
- D. Telecanthus
- E. Entropion

✓ 18. Which one of the following is the most frequent type of epicanthus?

- A. Epicanthus tarsalis
- B. Epicanthus lateralis
- C. Epicanthus inversus
- D. Epicanthus medialis
- E. Epicanthus bilateralis

✓ 19. Blepharoptosis is a condition in which one or both

- A. Upper eye lids assume an abnormally high position
- B. Lower eye lids assume an abnormally high position
- C. Lower eye lids assume an abnormally low position
- D. Both upper and lower eye lids are abnormally high
- E. Upper eye lids assume an abnormally low position

✓ 20. An important clue to diagnosis of levator maldevelopment causing ptosis is

- A. Lid lag on up gaze
- B. Lid lag on down gaze
- C. Lid retraction
- D. Strabismus
- E. Nystagmus

✓ 21. Marcus Gunn Syndrome is classified as

- A. Levator maldevelopment
- B. Myogenic ptosis
- C. Aponeurotic ptosis
- D. Neurogenic ptosis
- E. Mechanica ptosis

22. All types of ptosis are treated surgically except

- A. Levator maldevelopment
- B. Aponeurotic ptosis
- C. Neurogenic ptosis
- D. Senile ptosis
- E. Myasthenia gravis

✓ 23. Senile ptosis is classified as

- A. Levator maldevelopment
- B. Myogenic ptosis
- C. Aponeurotic ptosis
- D. Neurogenic ptosis
- E. Mechanica ptosis

24. The most common benign eye lid tumors are

- A. Nevi
- B. Papillomas
- C. Keratoacanthomas
- D. Xanthelasma
- E. Molluscum contagiosum

✓ 25. A 50 year old man comes to eye OPD with bilateral yellow plaques near the inner angle of eye. What comes in your mind?

- A. Keratoacanthoma
- B. Xanthelasma
- C. Cysts
- D. Papilloma
- E. Verruca vulgaris

Yellow



26. The most common congenital vascular tumor of eyelids is the

- A. Nevus flammeus
- B. Cavernous hemangioma
- C. Capillary hemangioma
- D. Angiofibroma
- E. Port wine stain

27. Capillary hemangioma regresses spontaneously; but its treatment is indicated when

- A. It is larger than 10 mm
- B. It is larger than 5 mm
- C. It appears on lower eyelid
- D. It blocks visual axis
- E. None of the above

28. The most common malignant tumor of eyelids is

- A. Squamous cell carcinoma
- B. Sebaceous gland carcinoma
- C. Sarcoma
- D. Hemangioma
- E. Basal cell carcinoma

29. The largest volume of tear fluid is produced by the

- A. Meibomian gland
- B. Lacrimal gland
- C. Accessory lacrimal gland
- D. Goblet cells
- E. Moll's glands

30. "Mucin" in tear film is secreted by

- A. Meibomian gland
- B. Lacrimal gland
- C. Accessory lacrimal gland
- D. Goblet cells
- E. Moll's glands

31. Which of the following is known as "basic secretors" of tear film?

- A. Meibomian gland
- B. Lacrimal gland
- C. Accessory lacrimal gland
- D. Goblet cells
- E. Moll's glands

32. Paradoxical lacrimation (Crocodile fear) is a condition characterized by

- A. Tearing while drinking
- B. Tearing while eating
- C. Tearing while sleeping
- D. Tearing while exercising
- E. Tearing while playing

33. Dacryocystitis is almost always secondary to

- A. Conjunctivitis
- B. Canaliculitis
- C. Nasolacrimal duct obstruction
- D. Systemic diseases
- E. Maxillary sinusitis

34. Acute Dacryocystitis in adults is usually caused by

- A. H. influenza
- B. S. aureus
- C. B-hemolytic streptococci
- D. Candida albicans
- E. Moraxella catarrhalis

35. Acute Dacryocystitis in children is caused by

- A. H. influenza
- B. S. aureus
- C. B-hemolytic streptococci
- D. Candida albicans
- E. Moraxella catarrhalis



36. If pressure on the lacrimal sac causes oozing out of cheesy material from the eye, the most probable site of obstruction is

- A. Lacrimal sac
- B. Canaliculi
- C. Puncta
- D. Nasolacrimal duct
- E. Lower end of lacrimal sac

✓37. Chronic dacryocystitis increases the risk of \_\_\_\_\_ after cataract surgery

- A. After-cataract
- B. Hemorrhage
- C. Cystoids macular edema
- D. Lens dislocation
- E. Endophthalmitis →

38. In adults, the presence of mucocele is evidence that the site of obstruction is in the

- A. Lacrimal sac
- B. Nasolacrimal duct →
- C. Puncta
- D. Upper canaliculus
- E. Lower canaliculus

39. "dacryocystorhinostomy" consists of forming a permanent anastomosis between

- A. Conjunctival sac and nose
- B. Lacrimal sac and nose →
- C. Conjunctival and lacrimal sac
- D. Canaliculus and nose
- E. Punctum and nose

40. In "Infantile dacryocystitis", the site of stenosis is usually

- A. Upper end of canaliculus
- B. Lower end of canaliculus
- C. Valve of Hasner
- D. Lacrimal sac
- E. None of the above

41. Probing is indicated in treating infantile dacryocystitis when stenosis persists for more than

- A. 3 months
- B. 6 months →
- C. 9 months
- D. 12 months
- E. 15 months

42. One probing probing is effective in \_\_\_\_\_

- A. 50 % of cases
- B. 60 % of cases
- C. 90 % of cases
- D. 75 % of cases →
- E. 100 % of cases

43. Probing is contraindicated when there is

- A. Acute infection ✓
- B. Chronic infection
- C. Subacute infection
- D. Canaliculus stenosis
- E. All of these

✓44. Most cases of canaliculus stenosis are

- A. Inherited
- B. Congenital
- C. Idiopathic
- D. Secondary to nasolacrimal duct obstruction
- E. Acquired →

✓45. Immunoglobulin(s) in tear film is / are

- A. IgA
- B. IgA, IgG
- C. IgA, IgG, IgE ✓
- D. IgA, IgE
- E. IgE

✓46. The most specific test for keratoconjunctivitis sicca is

- A. Tear osmolarity test
- B. Impression cytology
- C. Schirmer's test ✓
- D. Tear film breakage time



E. Ocular ferning's test

47. Tear film break up time is used to estimate the

A. Major lacrimal secretion

B. Mucin content

C. Accessory gland secretion

D. Lysosyme concentration

E. Fatty acid content

48. Normally tear film break up time is over

A. 30 Seconds

B. 60 Seconds

C. 15 Seconds

D. 10 Seconds

E. 5 minutes

49. "Goblet cell densities" on conjunctival surfaces can be counted by

A. Tear lysosyme assay

B. Impression cytology

C. Tear osmolality

D. Ocular ferning's test

E. Fluorescence staining

50. The mainstay of treatment of keratic conjunctivitis sicca is

A. Artificial tears

B. Antibacterials

C. Antiallergics

D. Mast cell stabilizers

E. Surgery

NO  
ANSWER

## LIDS, LACRIMAL APPARATUS & TEARS

### ANSWERS AND REFERENCES

- |                              |                              |                              |
|------------------------------|------------------------------|------------------------------|
| 1. B<br>Refer p. 67 Vaughan  | 2. E<br>Refer p. 67 Vaughan  | 3. B<br>Refer p. 68 Vaughan  |
| 4. C<br>Refer p. 68 Vaughan  | 5. E<br>Refer p. 68 Vaughan  | 6. D<br>Refer p. 68 Vaughan  |
| 7. A<br>Refer p. 68 Vaughan  | 8. B<br>Refer p. 69 Vaughan  | 9. A<br>Refer p. 69 Vaughan  |
| 10. D<br>Refer p. 69 Vaughan | 11. C<br>Refer p. 69 Vaughan | 12. D<br>Refer p. 69 Vaughan |
| 13. A<br>Refer p. 70 Vaughan | 14. E<br>Refer p. 70 Vaughan | 15. A<br>Refer p. 70 Vaughan |
| 16. C<br>Refer p. 70 Vaughan | 17. C<br>Refer p. 70 Vaughan | 18. A<br>Refer p. 70 Vaughan |
| 19. E<br>Refer p. 71 Vaughan | 20. B<br>Refer p. 72 Vaughan | 21. D<br>Refer p. 72 Vaughan |
| 22. E<br>Refer p. 73 Vaughan | 23. C<br>Refer p. 72 Vaughan | 24. B<br>Refer p. 74 Vaughan |
| 25. B<br>Old edition         | 26. C<br>Refer p. 76 Vaughan | 27. D<br>Refer p. 76 Vaughan |
| 28. E<br>Refer p. 76 Vaughan | 29. B<br>Refer p. 78 Vaughan | 30. D<br>Refer p. 78 Vaughan |
| 31. C<br>Refer p. 78 Vaughan | 32. B<br>Refer p. 79 Vaughan | 33. C<br>Refer p. 79 Vaughan |
| 34. B<br>Refer p. 79 Vaughan | 35. A<br>Refer p. 79 Vaughan | 36. D<br>Refer p. 79 Vaughan |
| 37. E<br>Refer p. 79 Vaughan | 38. B<br>Refer p. 79 Vaughan | 39. B<br>Refer p. 81 Vaughan |
| 40. C<br>Refer p. 79 Vaughan | 41. B<br>Refer p. 80 Vaughan | 42. D<br>Refer p. 80 Vaughan |
| 43. A<br>Refer p. 80 Vaughan | 44. E<br>Refer p. 80 Vaughan | 45. C<br>Refer p. 78 Vaughan |
| 46. A<br>Refer p. 78 Vaughan | 47. B<br>Refer p. 79 Vaughan | 48. C<br>Refer p. 79 Vaughan |
| 49. B<br>Refer p. 79 Vaughan | 50. A<br>Old edition         |                              |



## LAST MINUTE POINTS:

### LIDS AND LACRIMAL APPARATUS

- Hordeolum is infection of glands of eyelid.
- When meibomian glands are involved, the swelling is called internal hordeolum.
- External hordeolum (sty) is and infection of Zeis's and Moll's glands.
- Chalazion is an idiopathic sterile chronic granulomatous inflammation of meibomian gland.
- Chalazion is often treated by vertical incision into tarsal gland from conjunctival surface.
- Chalazion may cause astigmatism.
- Chalazion is differentiated from hordeolum by the absence of acute inflammatory signs.
- Anterior blepharitis is common bilateral inflammation on of eyelid margin.
- Posterior blepharitis is inflammation of eyelids secondary to dysfunction of Meibomian gland.
- Involutional entropion is the most common subtype. It occurs as a result of aging.
- Distichiasis is a condition manifested by accessory eye lashes.
- All types of ptosis are treated surgically except myasthenia gravis.
- In Marcus-Gunn Syndrome (Jaw – Winking Phenomenon), ptosis decreases when mouth is open.
- Papillomas are the most common benign eyelid tumor.
- The most common congenital vascular tumor of eyelids is capillary hemangioma.
- The most common malignant eyelid tumor is basal cell carcinoma.
- Glands of Moll's are modified sweat glands.
- Tearing while eating (crocodile tears) may be congenital, but are usually acquired after Bell's palsy.
- Dacryocystitis is most often unilateral and is *always* secondary to obstruction of nasolacrimal duct.
- Chronic Dacryocystitis increases the risk of endophthalmitis after cataract surgery.

- In adults, presence of mucocele is evidence that the site of obstruction is the nasolacrimal duct.
- Dacryocystorhinostomy is the definite treatment.
- In infantile Dacryocystitis the site of stenosis is usually at the valve of Hasner.
- Immunoglobulins IgA, IgG, and IgE, (AGE) are present in tears.
- The most characteristic feature on slit lamp examination of Sjogren syndrome is the interrupted or absent tear meniscus at the lower lid margin.
- Hyperosmolality test is considered as the most specific test for keratoconjunctivitis sicca.
- Artificial tears are the mainstay of treatment in Sjogren syndrome.
- Glands of sics are modified sebaceous glands.
- The skin fold is often large enough to cover part of the nasal sclera and causes PSEUDOSOTROPIA.
- Epicanthus tarsalis in which the superior lid fold is continuous with the epicanthal fold.
- Thickness of tear film is 7-10 um thick.



# OPTICS & REFRACTION

1. What is the contribution of cornea in the formation of retinal image?
  - A. 19 Diopters
  - B. 43 Diopters
  - C. 49 Diopters →
  - D. 10 Diopters
  - E. 30 Diopters
2. The refractive index of aqueous humor is about
  - A. 1
  - B. 1.3337
  - C. 1.6667
  - D. 2
  - E. 1
3. Which one of the following is not a part of "NEAR RESPONSE"?
  - A. Increased thickness of the lens
  - B. Pupillary constriction
  - C. Convergence
  - D. Ciliary muscle contraction
  - E. Pupilary dilation
4. Presbyopia is
  - A. Physiological loss of accommodation with age
  - B. Pathological loss of accommodation with age
  - C. Pathological hardening of the lens
  - D. Increased eye strain with age in distant vision
  - E. Irregular corneal surface
5. A person with emmetropic eye will start experiencing in near vision at
  - A. 30-32 years
  - B. 54-56 years
  - C. 60-62 years
  - D. 44-46 years →
  - E. 20-22 years

6. Which one of the following is the best treatment for presbyopia?
  - A. Penetrating keratoplasty
  - B. Hard contact lenses
  - C. Cylindrical lenses
  - D. Prism lenses
  - E. Plus lenses →
7. For every 1 mm increase in axial length, the eye is approximately
  - A. 3 Diopters more myopic
  - B. Double the risk of angle closure glaucoma
  - C. 3 times increased amblyopia risk
  - D. 3 diopters hyperopic
  - E. None of the above
8. Hyperopia that cannot be corrected with accommodation is called
  - A. Latent hyperopia
  - B. Manifest hyperopia →
  - C. Unresponsive hyperopia
  - D. Axial hyperopia
  - E. Index hyperopia
9. The age at which accommodation is maximum is
  - A. 2 years
  - B. 5 years
  - C. 8 years →
  - D. 45 years
  - E. 55 years
10. Age after which the loss of accommodation stabilizes is
  - A. 18 years
  - B. 55 years →
  - C. 30 years
  - D. 45 years
  - E. 18 years



11. Degree of hyperopia that can be overcome by accommodation is called

- ☒ A. Latent hyperopia
- B. Manifest hyperopia
- C. Unresponsive hyperopia
- D. Axial hyperopia
- E. Index hyperopia

12. If the produces an image with multiple focal points or lines, the defect is called

- A. Amblyopia
- B. Emmetropia
- C. Astigmatism
- D. Anetropia
- E. Presbyopia

13. Correction of astigmatism is achieved by

- ☒ A. LASIK
- B. Cylindrical lenses
- C. Spherical lenses
- D. Hard contact lenses
- E. Keratoplasty

14. At birth, most babies are slightly

- A. Myopic
- B. Amblyopic
- C. Anisometropic
- D. Hyperopic
- E. Cataractous

15. Lens is much more spherical at birth and reaches adult conformation at about

- A. 1 years
- B. 2 years
- C. 8 years
- D. 10 years
- ☒ E. 6 years

16. Refractive errors are

- A. Sporadic
- B. Acquired
- C. Inherited
- D. Traumatic
- E. All of these

17. Which of the following is a major cause of anisometropia?

- A. Anisocoria
- B. Myopia
- C. Hyperopia
- ☒ D. Amblyopia →
- E. Aniseikonia

18. Aniseikonia is a prominent problem of

- ☒ A. Monocular aphakia →
- B. Lens dislocation
- C. Ocular infection
- D. Myopia
- E. Astigmatism

19. Safest method for refractive error correction is

- A. Contact lenses
- B. LASIK
- ☒ C. Spectacles →
- D. Lamellar keratoplasty
- E. Phacoemulsification

20. Retinoscope is used for

- A. Fundal examination
- B. Retinal examination
- C. Retinal blood vessel examination
- D. Refractive errors
- E. All of the above



21. A defect in which there is a difference in the size of retinal image is called

- A. Anisometropia  
 B. Anisocoria → unequal size of pupil  
 C. Retinitis pigmentosa  
 D. Amblyopia  
 E. Aniseikonia ←

22. In retinoscopy, if the retinoscopic reflex moves in the opposite direction to that of the intercept.

- A. Place ve lens before the patient's eye  
 B. The patient has myopia  
 C. The response is consider normal  
 D. Place ve lens before the patient's eye  
 E. None of the above

## OPTICS & REFRACTION

### ANSWERS AND REFERENCES

- |   |                               |  |
|---|-------------------------------|--|
| 1. C<br>Refer p. 405 Vaughan                  | 2. B<br>Refer p. 396 Vaughan  | 3. E<br>Refer p. 405 Vaughan                 |
| 4. A ✓<br>Refer p. 406 Vaughan                | 5. D<br>Refer p. 406 Vaughan  | 6. E<br>Refer p. 406 Vaughan                 |
| 7. A<br>Refer p. 407 Vaughan                  | 8. B<br>Refer p. 407 Vaughan  | 9. C<br>Refer p. 406 Vaughan<br>(Table 21-2) |
| 10. B<br>Refer p. 406 Vaughan<br>(Table 21-2) | 11. A<br>Refer p. 407 Vaughan | 12. C<br>Refer p. 408 Vaughan                |
| 13. B<br>Refer p. 408 Vaughan                 | 14. D<br>Refer p. 408 Vaughan | 15. E<br>Refer p. 408 Vaughan                |
| 16. C<br>Refer p. 408 Vaughan                 | 17. D<br>Refer p. 409 Vaughan | 18. A<br>Refer p. 409 Vaughan                |
| 19. C<br>Refer p. 409 Vaughan                 | 20. D<br>Refer p. 410 Vaughan | 21. E ✓<br>Refer p. 409 Vaughan              |
| 22. D<br>Refer p. 410 Vaughan                 |                               |  |

### KEY POINTS:-

- > The contribution of lens in the formation of retinal image in 19D.
- > Emmetropia is absence of refractive error.
- > Ametropia is the presence of refractive error.
- > 8 years mean accommodation is 13.8 D.
- > Refractive index of eye = 1.33
- > Refractive index of aqueous = 1.337
- > Axial length of eye = 22.5 mm
- > Hyperopia is therefore a frequent lower of esotropia (crossed eye) and monocular amblyopia
- > Cylindrical lens is combination of spherical lens.
- > Anisometropia is the difference in refractive error of two eye.



# ORBIT

1. What is the hallmark of orbital disease?

- A. Endophthalmitis
- B. Proptosis →
- C. Lid retraction
- D. Raise IOP
- E. Panophthalmitis

2. Causes of pseudoproptosis is/are

- A. High myopia
- B. Lid retraction
- C. Buphthalmos
- D. Graves disease
- E. A, B, and C

3. Proptosis seen on bending the head forwards is seen in

- A. Neurofibromatosis 1
- B. Carotico-cavernous fistula
- C. Meningocele
- D. Arterial-orbital vascular malformation
- E. Venous-orbital vascular malformation

4. Standard method for quantifying magnitude of proptosis is

- A. CT
- B. MRI
- C. B-Scan Ultrasound
- D. Hertel Exophthalmometer
- E. X-Rays

5. MRI is contraindicated in which of the following?

- A. Leukemia
- B. Ferrous intraocular foreign body
- C. Breast carcinoma
- D. Active infection
- E. All of these

6. Which investigation is required to confirm the diagnosis of carotid-cavernous sinus fistula?

- A. Arteriography
- B. Venography
- C. Ultrasonography
- D. CT and MRI
- E. B-scan

7. Most common cause of proptosis in adults is

- A. Orbital cellulites
- B. Ethmoid hemangioma
- C. Graves disease
- D. Pseudotumor
- E. Rhabdomyosarcoma

8. Ptosis in thyroid ophthalmopathy is due to which of the following concomitant conditions?

- A. Myasthenia gravis
- B. Uveitis
- C. Thyroid tumor
- D. All of the above
- E. None of the above

9. Most common cause of proptosis in children is

- A. Orbital cellulites
- B. Ethmoid hemangioma
- C. Graves disease
- D. Pseudotumor
- E. Rhabdomyosarcoma

10. Most cases of orbital cellulitis extend from which of the following paranasal sinuses?

- A. Maxillary
- B. Ethmoid →
- C. Frontal
- D. Sphenoid
- E. Both A and C

11. Most common presentation of orbital cellulitis is

- A. Chemosis
- B. Limitation of eye movement
- C. Reduction of vision
- D. Preseptal cellulitis
- E. Orbital abscess



12. Presenting sign usually present in orbital extension of a sinus mucocele is

- A. Axial proptosis
- B. Orbital abscess
- C. Progressive non-axial proptosis
- D. Strabismus
- E. Intraocular inflammation

13. Which of the following is the most common primary intraocular malignancy of childhood?

- A. Leiomyoma
- B. Retinoblastoma
- C. Cavernous hemangioma
- D. Malignant melanoma
- E. Rhabdomyosarcoma

14. "Lisch Nodules" (Iris Hamartomas) are characteristic of

- A. Vogt-Koyanagi Harada Disease
- B. Neurofibromatosis I
- C. Sarcoidosis
- D. Wilson's disease
- E. Iris melanoma

15. In men, women and children, most metastatic tumors to the orbit come from

- A. Prostate, breast and kidney respectively
- B. Lung, ovary and liver respectively
- C. Prostate, ovary and neuroblastoma respectively
- D. Lung, ovary and neuroblastoma respectively
- E. Lung, breast and neuroblastoma respectively

16. Which of the following is the most common orbital epithelial tumor?

- A. Basal cell carcinoma
- B. Squamous cell carcinoma
- C. Pleomorphic adenoma
- D. Optic nerve glioma
- E. Histiocytosis

## ORBIT

### ANSWERS AND REFERENCES

- |                      |                      |                      |
|----------------------|----------------------|----------------------|
| 1. B                 | 2. E                 | 3. C                 |
| Refer p. 259 Vaughan | Refer p. 259 Vaughan | Refer p. 259 Vaughan |
| 4. D                 | 5. B                 | 6. A                 |
| Refer p. 259 Vaughan | Refer p. 261 Vaughan | Refer p. 262 Vaughan |
| 7. C                 | 8. A                 | 9. A                 |
| Refer p. 262 Vaughan | Refer p. 262 Vaughan | Refer p. 264 Vaughan |
| 10. B                | 11. D                | 12. C                |
| Refer p. 264 Vaughan | Refer p. 264 Vaughan | Refer p. 265 Vaughan |
| 13. E                | 14. B                | 15. E                |
| Refer p. 267 Vaughan | Refer p. 268 Vaughan | Refer p. 269 Vaughan |
| 16. C                |                      |                      |
| Refer p. 269 Vaughan |                      |                      |

# OCULAR DISORDERS IN

## SYSTEMIC DISEASES

1. Which of the following statements describes the pre-retinal haemorrhages the best

- A. They are flame shaped
- B. Are also called "dot and blot" haemorrhages
- C. Located in nerve fiber layer
- D. Crescentic with gravity dependent fluid level →
- E. Located in deeper layers of retina

2. Flame shaped haemorrhages are located in which of the following layers of retina?

- A. Outer nuclear layer
- B. Layer of rods and cones
- C. Nerve fiber layer
- D. Inner plexiform layer
- E. Outer plexiform layer

3. Impairment of blood supply to the optic disc produces

- A. Altitudinal field defect
- B. Peripheral field defect
- C. Central field defect
- D. Ring scotoma
- E. Arcuate scotoma

4. Which of the following causes optic nerve infarction?

- A. Hypertension
- B. Giant cell arteritis
- C. Atherosclerosis
- D. Acute blood loss
- E. All of the above

5. Amaurosis fugax with parasthesias in contralateral limbs localizes the disorder to

- A. Left ventricle
- B. Carotid artery →
- C. Jugular vein
- D. Cardiac conduction
- E. None of the above

6. Most cases of amaurosis fugax are due to

- A. Hollenhorst plaques
- B. Galenic emboli
- C. Platelet-fibrin emboli ✓
- D. Defective cardiac valves
- E. Hypertension

7. Retinal emboli most commonly arise from

- A. Infective endocarditis
- B. Mitral valve prolapse
- C. Carotid artery disease →
- D. Atrial fibrillation
- E. Retinal migraine

8. Cotton-wool spots are seen in which of the following?

- A. SLE
- B. Pancreatitis
- C. HIV
- D. DM
- E. All of the above

9. Regardless of the cause, cotton-wool spots resolve over the period of

- A. 15 days
- B. 4 weeks
- C. 6 months
- D. 6 weeks
- E. 1 year



10. In young patients presenting with central retinal vein occlusion, which one of the following must always be excluded?

- A. Hypertension
- B. Collagen vascular disease
- C. DM
- D. Anti-phospholipid syndrome →
- E. Biliary cirrhosis

11. One of the earliest signs of hypertensive retinopathy is

- A. Focal attenuation of major retinal vessels →
- B. Cotton-wool spots
- C. Macular star
- D. Microaneurysms
- E. Severe disc edema

12. All of the following cause carotid artery-cavernous fistula except

- A. Aneurysm
- B. Ehlers danlos syndrome
- C. Collagen vascular disease
- D. Trauma
- E. Acute blood loss →

13. Which of the following does not cause pseudotumor cerebri?

- A. Drug therapy
- B. Atherosclerosis
- C. Hormonal contraceptives
- D. Sleep apnea syndrome
- E. None of the above

14. In diabetes mellitus, neovascularisation of iris can causes which of the following?

- A. Anisocoria
- B. Iridodonesis
- C. Rubeosis irides
- D. Blood vessels on posterior iris surface
- E. Decreased IOP

15. Which of the following is a risk factor for the exacerbation of Grave's ophthalmopathy?

- A. Oral anti-thyroid therapy
- B. Radio-iodine therapy
- C. Surgical debulking of thyroid
- D. Alcoholism
- E. All of the above

16. Which of the following is almost pathognomic of thyroid disease? Lid lag

- A. Lagophthalmos →
- B. Exophthalmos
- C. Proptosis
- D. Ptosis
- E. Impaired eye elevation

17. Most frequent finding associated with Grave's disease is Lid lag

- A. Lagophthalmos
- B. Exophthalmos
- C. Proptosis
- D. Ptosis
- E. Impaired eye elevation

18. Which of the following clinical finding is not associated with leprosy?

- A. Lagophthalmos
- B. Madarosis
- C. Pinpoint pupil
- D. Cycloplegia
- E. Iris pearls

19. Most common eye lesion in congenital syphilis is

- A. Chorioretinitis
- B. D'sciform keratitis
- C. Interstitial keratitis ✓
- D. Ocular chancre
- E. Argyll-Robertson pupil

20. Most common eye complication in Rubella is

- A. Strabismus
- B. Infantile glaucoma
- C. Nystagmus
- D. Uveal coloboma
- E. Cataract

My Answer  
C

21. In immunocompromised patients, the most common cause of retinitis is

- A. EBV
- B. CMV
- C. Toxoplasmosis
- D. Toxocariasis
- E. Syphilis

22. Most common ocular finding in HIV is

- A. Retinal microvasculopathy
- B. Cotton-wool spots
- C. Hard exudates
- D. Dot and Blot haemorrhages
- E. Both A and B

23. Visual loss in Behcet's disease is due to

- A. Retinal vasculitis
- B. Steroid therapy
- C. Optic disc edema
- D. Choroidal infarcts
- E. All of the above

24. Kayser-Fleischer ring is seen in which of the following disorders?

- A. Reiter's syndrome
- B. Hepatolenticular degeneration
- C. Marfan syndrome
- D. Ankylosing spondylitis
- E. Cystinosis

25. A serious ocular complication of long term chloroquine therapy is

- A. Color vision defect
- B. Rod dysfunction
- C. Peripheral field loss
- D. Central field loss →
- E. Uveitis

26. Kayser-Fleischer ring is located in

- A. Bowman's layer
- B. Iris
- C. Corneal stroma
- D. Peripheral lens
- E. Descemet's membrane →

#### KEY POINTS:-

➤ Oscillopsia is due to ocular instability.

35/159  
35 Correct



## OCULAR DISORDERS IN SYSTEMIC DISEASES

### ANSWERS AND REFERENCES

- |   |   |
|---|---|
| <p>1. <b>D</b><br/>Refer p. 314 Vaughan</p> <p>4. <b>E</b><br/>Refer p. 315 Vaughan</p> <p>7. <b>C</b><br/>Refer p. 317 Vaughan</p> <p>10. <b>D</b><br/>Refer p. 318 Vaughan</p> <p>13. <b>B</b><br/>Refer p. 322 Vaughan</p> <p>16. <b>A</b><br/>Refer p. 327 Vaughan</p> <p>19. <b>C</b><br/>Refer p. 331 Vaughan</p> <p>22. <b>E</b><br/>Refer p. 334 Vaughan</p> <p>25. <b>D</b><br/>Refer p. 343 Vaughan</p> | <p>2. <b>C</b><br/>Refer p. 314 Vaughan</p> <p>5. <b>B</b> ✓<br/>Refer p. 317 Vaughan</p> <p>8. <b>E</b><br/>Refer p. 317 Vaughan<br/>(Figure 15-8)</p> <p>11. <b>A</b><br/>Refer p. 320 Vaughan</p> <p>14. <b>C</b> ✓<br/>Refer p. 326 Vaughan</p> <p>17. <b>E</b><br/>Refer p. 327 Vaughan</p> <p>20. <b>E</b><br/>Refer p. 333 Vaughan</p> <p>23. <b>A</b><br/>Refer p. 338 Vaughan</p> <p>26. <b>E</b><br/>Refer p. 339 Vaughan</p> |
| <p>3. <b>A</b><br/>Refer p. 314 Vaughan</p> <p>6. <b>C</b><br/>Refer p. 317 Vaughan</p> <p>9. <b>D</b><br/>Refer p. 317 Vaughan<br/>(Figure 15-8)</p> <p>12. <b>E</b> ✓<br/>Refer p. 322 Vaughan</p> <p>15. <b>B</b><br/>Refer p. 327 Vaughan</p> <p>18. <b>D</b><br/>Refer p. 330 Vaughan</p> <p>21. <b>B</b><br/>Refer p. 334 Vaughan</p> <p>24. <b>B</b><br/>Refer p. 339 Vaughan</p>                          |   |

## OPHTHALMOLOGIC EXAMINATION

1. Shaking field of vision is called
  - Pl. otopsia
  - Oscillopsia
  - Micropsia
  - Floater
  - None of the above
2. Central focal cataract is seen worse in sunlight due to
  - Lens thickening
  - Pupillary dilation
  - Ciliary body contraction
  - Light adaptation
  - Pupillary constriction
3. Asymmetry of papillary sized is called
  - Aniseikonia
  - Anisometropia
  - Anisocoria
  - Amblyopia
  - None of the above
4. Procedure by which any refractive error is characterized and quantified is called
  - Refraction
  - Ophthalmoscopy
  - Retinoscopy
  - Perimetry
  - Tonometry

5. While describing central vision in Snellen's chart, the denominator in "20/40" denotes

A. Testing distance between chart and patient  
 B. The largest line the patient is able to read clearly  
 C. The degree of peripheral defect the patient has  
 D. The smallest line the patient is able to read clearly  
 E. None of the above

6. Regarding "Pin-Hole" test

A. Outer misfocused rays are blocked  
 B. Can be performed in dim light  
 C. Tests without pinhole are superior  
 D. Clear retinal image cannot be formed  
 E. Only a few peripherally aligned rays will reach the retina

7. Totally blind eye is one which cannot perceive

A. Counting finger at 2 feet  
 B. Light  
 C. Hand movement at 1 foot  
 D. Visual acuity 5/200  
 E. None of the above

8. Marcus-Gunn Pupil is seen in

A. Neurosyphilis  
 B. Acoustic neuroma  
 C. Papilledema  
 D. Herpetic keratitis  
 E. Relative afferent papillary defect

9. Type of tonometer which measure IOP independent of corneal thickness is

A. Goldman Applanation tonometer  
 B. Schiotz tonometer  
 C. Pneumatonometer  
 D. Pascal dynamic tonometer  
 E. None of the above

10. Tonometer that can be used when the surface of cornea is irregular is

A. Goldman Applanation tonometer  
 B. Schiotz tonometer  
 C. Pneumatonometer  
 D. Pascal dynamic tonometer  
 E. None of the above

11. Which of the following is correct regarding direct ophthalmoscopy?

A. Binocular image is seen  
 B. 15 times magnified view  
 C. Wider view of retina  
 D. Inverted image  
 E. Better illumination than indirect

12. If the examiner wishes to examine the superonasal field of retina he must ask the subject to look in

A. Supertempora direction  
 B. Inferotempora direction  
 C. Superonasal direction  
 D. Inferonasal direction  
 E. Distant object more than 6 meter away

13. Incorrect statement regarding indirect ophthalmoscopy is

A. Magnification 3.5 times  
 B. Binocular vision  
 C. Blight light source  
 D. Extreme periphery is poorly visualized  
 E. Image formed is real and inverted

14. Perimetry is used to examine

A. Peripheral field  
 B. Central field  
 C. Visual acuity  
 D. Blind spots  
 E. A and B



15. In kinetic perimetry, by moving an object inwards from multiple directions, a boundary is formed called

- A. Haptic
- B. Optic
- C. Perimetry sketch
- D. Isopter ✓
- E. In. crept

16. Method of examination of anterior chamber angle anatomy is known as

- A. Tonometry
- B. Gonioscopy
- C. Ophthalmoscopy
- D. Perimetry
- E. None of the above

17. Most accurate method of measurement of axial length is

- A. Ultrasonography A-Scan ✓
- B. Ultrasonography B-Scan
- C. Ophthalmoscopy
- D. Slit lamp Examination
- E. Retinoscopy

18. The dye used in Goldmann Appplanation Tonometer is

- A. Rose Bengal
- B. Fluorescein ✓
- C. Lissamine
- D. Geimsa
- E. H & E

19. In order to calculate the power for an intraocular lens implant after cataract surgery

- A. B-scan is used
- B. A-Scan is used ✓
- C. CT is used
- D. MRI is used
- E. Keratometry is used

## OPHTHALMOLOGIC EXAMINATION

### ANSWERS AND REFERENCES

- |                               |                              |                               |
|-------------------------------|------------------------------|-------------------------------|
| 1. B<br>Refer p. 28 Vaughan   | 2. E<br>Refer p. 28 Vaughan  | 3. C<br>Refer p. 28 Vaughan   |
| 4. A<br>Refer p. 30 Vaughan   | 5. D<br>Refer p. 29 Vaughan  | 6. A<br>Refer p. 29 Vaughan   |
| 7. B<br>Refer p. 31 Vaughan   | 8. E<br>Refer p. 32 Vaughan  | 9. D<br>Refer p. 36 Vaughan   |
| 10. C<br>Refer p. 36 Vaughan  | 11. B<br>Refer p. 37 Vaughan | 12. C<br>Refer p. 339 Vaughan |
| 13. D<br>Refer p. 339 Vaughan | 14. E<br>Refer p. 41 Vaughan | 15. D<br>Refer p. 42 Vaughan  |
| 16. B<br>Refer p. 48 Vaughan  | 17. A<br>Refer p. 55 Vaughan | 18. B<br>Refer p. 36 Vaughan  |
| 19. B<br>Refer p. 55 Vaughan  |                              |                               |

# NEURO-OPHTHALMOLOGY

1. What percentage of fibers in optic tract subserves papillary function?

- A. 10 %
- B. 15 %
- C. 25 % ✓
- D. 40 %
- E. 90 %

2. Lesion in visual pathway posterior to optic chiasma may cause

- A. Ipsilateral homonymous hemianopia
- B. Unilateral field defects
- C. Contralateral heteronymous hemianopia ✓
- D. Contralateral homonymous hemianopia
- E. None of the above

3. Which one of the following is highly suggestive of optic nerve disease?

- A. Poor colour vision
- B. Afferent papillary defect ✓
- C. Optic disc changes
- D. Macular sparing
- E. Peripheral visual field loss

4. Optic disc swelling must be present in the acute stage for the diagnosis to be made of

- A. Anterior ischemic optic neuropathy (AION) ✓
- B. Optic neuritis
- C. Papilledema
- D. Multiple sclerosis
- E. None of the above

5. Excavation of the optic nerve head (cupping) is generally a sign of

- A. Multiple sclerosis
- B. AION
- C. Glaucomatous optic neuropathy ✓
- D. Papilledema
- E. Papillitis

6. The most common cause of optic of neuritis is

- A. Demyelinating disease (Multiple sclerosis) ✓
- B. Infection (toxoplasmosis)
- C. Granulomatous (sarcoidosis)
- D. Immune mediated (SLE)
- E. Vascular optic neuropathy

7. The cardinal symptom of optic neuritis is

- A. Floaters
- B. Pain ✓
- C. Photophobia
- D. Poor colour vision
- E. Loss of vision

8. The most commonly found field defect in idiopathic demyelinating optic neuritis is

- A. Arcuate scotoma
- B. Central scotoma ✓
- C. Ring scotoma
- D. Bjerrum's scotoma
- E. Seidel scotoma

9. Which one of the following features does not differentiate papilledema from papillitis?

- A. Bilateral disc involvement
- B. Normal corrected visual acuity
- C. Normal papillary light response
- D. Intact visual field
- E. All are differentiating features ✓



10. The cause of multiple sclerosis is

- ☒ A. Unknown
- B. Toxoplasmosis
- C. Vascular insufficiency
- D. Trauma
- E. Radiation exposure

11. AION is characterized by

- ☒ A. Pallid disc atrophy and acute loss of vision
- ~~B. Pallid disc swelling and acute loss of vision~~
- C. Pallid disc atrophy and gradual loss of vision
- D. Pallid disc swelling and gradual loss of vision
- E. Optic disc cupping

12. Low optic cup to disc ratio is almost always present in

- A. Glaucoma
- B. Papilledema
- ☒ C. Non-arteritic AION →
- D. Optic neuritis
- E. Myopia

13. Papilledema by definition is

- A. Optic disc atrophy
- B. Optic disc swelling due to any cause
- ☒ C. Optic disc swelling due to raised ICP
- D. Excavation of disc
- E. Inflammation of optic disc due to raised ICP

14. In ophthalmology practice, a frequent cause of papilledema is

- A. Cerebral tumors
- B. Abscess
- C. Subdural hematoma
- D. AV malformations
- ☒ E. Idiopathic intracranial HTN

15. Characteristic symptom of papilledema is

- A. Transient visual obscurations
- ☒ B. Sudden complete visual loss
- C. Gradual loss of peripheral field
- D. Gradual loss of central field
- E. Difficulty in red green discrimination

16. Centrocecal scotoma occurs in

- A. Optic injury caused by metallic poisoning
- ☒ B. Tobacco-alcohol amblyopia
- C. Deprivational amblyopia
- D. Mehanol poisoning
- E. Retinitis pigmentosa

17. The most common cause of optic chiasma lesion is

- A. Trauma
- B. Increased ICP
- ☒ C. Pituitary tumor
- D. Diabetes mellitus
- E. HTN

18. About craniopharyngiomas

- A. Arises from Rathke's pouch
- ☒ B. Become symptomatic between ages 10-35 years of age
- C. They are usually supra-sellar
- D. Calcifications commonly occur
- E. All of the above

19. Which of the following is most helpful to distinguish between decreased vision due to cataract and that due to optic nerve disease?

- A. Snellen's visual acuity test
- ☒ B. RAPD
- C. Ophthalmoscopy
- D. Retinoscopy
- E. Confrontation testing

20. "Pupillary light-Near dissociation" means

- A. More miosis with light reflex
- ☒ B. More miosis with near response
- C. More mydriasis with light reflex
- D. More mydriasis with near response
- E. RAPD

21. "Pupillary light-Near dissociation" is most commonly due to

- A. Congenital syphilis
- B. Trauma
- C. Vascular infarcts
- ☒ D. RAPD
- E. None of the above

22. Argyll-Robertson pupils are strongly suggestive of

- ☒ A. Neurosyphilis
- B. Horner's syndrome
- C. Papilledema
- D. Optic nerve atrophy
- E. Trauma

23. Horner's syndrome is characterized by

- A. Miosis
- B. Ptosis
- C. Anhydrosis
- D. Tonic pupil
- E. A, B and C

24. In ocular motor nerve palsies secondary to ischemia, recovery in how many months is the rule?

- A. 6 months
- B. 2 months
- C. 1 months
- D. 12 months
- ☒ E. 4 months

25. Congenital condition consisting of elevation of ptotic eye lid on movement of jaw is termed as

- ☒ A. Marcus-Gunn phenomenon
- B. Argyll-Robertson pupil
- C. Oculomotor synkinesis
- D. Cyclic oculomotor palsy
- E. Munson's phenomenon

26. The most common single extraocular muscle palsy is

- A. Oculomotor nerve palsy
- B. Trochlear nerve palsy
- ☒ C. Abducens nerve palsy
- D. Optic nerve palsy
- E. Trigeminal nerve palsy

27. Down beat nystagmus is characteristically associate with

- A. Syringomyelia
- B. Multiple sclerosis
- C. Facial nerve palsy
- D. Arnold chiani malformation
- ☒ E. Brainstem disease

#### KEY POINTS:-

- > **Myasthenia Gravis** Manifested by the weakening of extra ocular muscles, young aged (20-40).
- > Order patient are more commonly male and more commonly have a thymoma.
- > Anti - acetylcholine receptor antibodies are diagnostic. Receptor tyrosine cinase)
- > Amiodarone causes bilateral optic neuropathy, chronic disk swelling.



NEURO-OPHTHALMOLOGYANSWERS AND REFERENCES

- |                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 1. C<br>Refer p. 271 Vaughan  | 2. D<br>Refer p. 271 Vaughan  | 3. B<br>Refer p. 273 Vaughan  |
| 4. A<br>Refer p. 283 Vaughan  | 5. C<br>Refer p. 273 Vaughan  | 6. A<br>Refer p. 278 Vaughan  |
| 7. E<br>Refer p. 278 Vaughan  | 8. B<br>Refer p. 279 Vaughan  | 9. E<br>Refer p. 279 Vaughan  |
| 10. A<br>Refer p. 281 Vaughan | 11. B<br>Refer p. 283 Vaughan | 12. C<br>Refer p. 283 Vaughan |
| 13. C<br>Refer p. 283 Vaughan | 14. E<br>Refer p. 283 Vaughan | 15. A<br>Refer p. 283 Vaughan |
| 16. B<br>Refer p. 287 Vaughan | 17. C<br>Refer p. 291 Vaughan | 18. E<br>Refer p. 291 Vaughan |
| 19. B<br>Refer p. 281 Vaughan | 20. B<br>Refer p. 294 Vaughan | 21. D<br>Refer p. 296 Vaughan |
| 22. A<br>Refer p. 296 Vaughan | 23. D<br>Refer p. 296 Vaughan | 24. E<br>Refer p. 299 Vaughan |
| 25. A<br>Refer p. 301 Vaughan | 26. C<br>Refer p. 302 Vaughan | 27. D<br>Refer p. 304 Vaughan |

VITREOUS

1. The vitreous is
  - A. 80 % water
  - B. 98 % water ✓
  - C. 92 % water
  - D. 50 % water
  - E. 95 % water
2. Cause/s of contraction of vitreous collagen matrix is / are
  - A. Aging
  - B. Hemorrhage
  - C. Inflammation
  - D. Myopia
  - E. All of the above
3. The vitreous never detaches from
  - A. Optic nerve
  - B. Macula
  - C. Vitreous base ✓
  - D. Retinal vessels
  - E. Optic disc
4. If the vitreous is too opaque, which of the following is used to determine if the retina is attached or not?
  - A. Indirect ophthalmoscopy
  - B. A-Scan
  - C. Slit lamp examination
  - D. B-Scan ✓
  - E. Retinoscopy
5. Majority of floater complains are due to
  - A. Posterior vitreous detachment ✓
  - B. Retinal detachment
  - C. Optic disc swelling
  - D. Optic atrophy
  - E. Vitritis

## 6. Light flashes (photopsia) are caused by

- A. Vitreous hemorrhage
- B. Posterior vitreous detachment
- C. Mechanical stimulation of retina
- D. Anterior vitreous detachment
- E. Optic neuritis

## 7. Retinal breaks occur more commonly in patients with

- A. Myopia
- B. Hyperopia
- C. Astigmatism
- D. Presbyopia
- E. Intraocular infection

VITREOUSANSWERS AND REFERENCES

- |                      |                      |                      |
|----------------------|----------------------|----------------------|
| 1. B                 | 2. E                 | 3. C                 |
| Refer p. 183 Vaughan | Refer p. 183 Vaughan | Refer p. 183 Vaughan |
| 4. D                 | 5. A                 | 6. C                 |
| Refer p. 185 Vaughan | Refer p. 185 Vaughan | Refer p. 186 Vaughan |
| 7. E                 |                      |                      |
| Refer p. 186 Vaughan |                      |                      |

KEY POINTS:-

- > Vitreous is composed of collagen and fiber matrix and hyaluronic acid gel.
- > The outer surface of vitreous, known as cortex in contact with the lens (Anterior vitreous cortex).
- > The inner surface adherent to retina is called posterior vitreous cortex.
- > Vitreous is also adherent to the optic nerve and to a lesser extent, the macula and retinal vessels.
- > Indirect ophthalmoscopy provides a large field of vision.
- > YAG laser vitreolysis complication is retinal detachment and cataract.

RETINA

1. All of the following are true about Age Related Macular Degeneration except

- A. It is a multifactorial disease
- B. It occurs in people over age 55
- C. It is associated with alcohol
- D. Causes irreversible blindness
- E. Pathogenesis is related to oxidative stress

2. "Drusen" are situated within

- A. Decemet's membrane
- B. Bowman's layer
- C. Bruch's membrane
- D. Retinal pigment epithelium
- E. Sensory retina

3. Scotopic vision is the feature of

- A. Rods
- B. Cones
- C. Rods and cones
- D. Foveola
- E. Peripheral retina

4. The most sensitive method for the detection of choroidal neovascularisation is

- A. Fundus photography
- B. Direct ophthalmoscopy
- C. Indirect ophthalmoscopy
- D. Fluorescein angiography
- E. Slit lamp examination



5. Which of the following is not a sign of early ARM/D?

- A. Pigmentary changes
- B. Limited drusen
- C. Neovascularisation
- D. Pigment epithelial atrophy
- E. None is the sign of ARM/D

6. Which one of the following is responsible for good visual acuity?

- A. Rods and cones
- B. Rods only
- C. Ganglion cell layer
- D. Inner limiting membrane
- E. Basal cell layer
- F. Pigment epithelial layer

7. Which one of the following is not a layer of retina?

- A. Nerve fiber layer
- B. Ganglion cell layer
- C. Inner limiting membrane
- D. Basal cell layer
- E. Pigment epithelial layer

8. Which one of the following is the most common form of vitreoretinal degeneration?

- A. Macular degeneration
- B. Meesman's degeneration
- C. Lattice degeneration
- D. Fuch's dystrophy
- E. Pigmentary degeneration

9. Which one of the following is not related to ARM/D?

- A. Smoking is a proven risk factor
- B. Retinal laser photocoagulation is treatment of choice
- C. Vitamins and anti-oxidants are used for prophylaxis
- D. There is no surgical treatment
- E. Anti-VEGF is the most effective treatment

10. Rhegmatogenous retina detachment may occur in all except

- A. Myopia
- B. Aphakia
- C. Lattice degeneration
- D. Trauma
- E. Hypertensive retinopathy

11. Most common type of retinal detachment is

- A. Rhegmatogenous
- B. Serous
- C. Tractional
- D. Hemorrhagic
- E. Non rhegmatogenous

12. Most common cause of tractional retinal detachment is

- A. Trauma
- B. Retinopathy of prematurity
- C. Diabetic retinopathy
- D. Lattice degeneration
- E. High myopia

13. The cause of sudden painless loss of vision is

- A. Retinal vein occlusion
- B. Acute congestive glaucoma
- C. Cataract
- D. Chronic open angle glaucoma
- E. Hypertensive retinopathy

14. Causes of sudden visual loss are all except

- A. Central retinal artery occlusion
- B. Central retinal vein occlusion
- C. Vitreous hemorrhage
- D. Acute congestive glaucoma
- E. Cataract

15. In myopic macular degeneration, there is greater than

- A. 5 diopters myopia
- B. 6 diopters myopia ✓
- C. 8 diopters myopia
- D. 3 diopters myopia
- E. 10 diopters myopia

16. Neovascular glaucoma is complication of

- A. ARMD
- B. Diabetic retinopathy ✓
- C. Central retinal artery occlusion
- D. Myopia
- E. A and C

17. The treatment of choice for large retinoblastoma is

- A. Surgical excision
- B. Laser therapy
- C. Chemotherapy
- D. Enucleation ✓
- E. Cryotherapy

18. About retinoblastoma

- A. Bilateral in 30 % of cases ✓
- B. It as life endangering tumor of childhood
- C. Enucleation is the treatment of choice
- D. Usually present as leukocoria
- E. Argyll Robertson pupil is the characteristic finding

19. Leukocoria may be the finding of all except

- A. Retrolental fibroplasias
- B. Persistent hyperplastic vitreous
- C. Retinal dysplasia
- D. Aphakia ✓
- E. Retinoblastoma

20. All of the following are risk factor for development and progression of diabetic retinopathy except

- A. Chronic hyperglycemia
- B. Hypertension
- C. Hypercholesterolemia
- D. Smoking
- E. Alcohol ✓

21. The earliest change of diabetic retinopathy is

- A. Flame shaped haemorrhages
- B. Dot hemorrhages
- C. Micro-aneurysms ✓
- D. Macro-aneurysms
- E. Neovascularisation

22. Complication of central retinal vein occlusion is

- A. Macular edema ✓
- B. Complicated cataract
- C. Neovascular glaucoma
- D. A and C ✓
- E. All of the above

23. Characteristic fundus change in central retinal vein occlusion is

- A. Retinal vein occlusion
- B. Retinal artery occlusion
- C. Diabetic retinopathy
- D. Hypertensive retinopathy
- E. Tractional retinal detachment

24. The most effective treatment of rhegmatogenous retinal detachment is

- A. Pneumatic retinopex
- B. Scleral buckling ✓
- C. Pars plana vitrectomy
- D. Laser photo coagulation
- E. Cryotherapy



✓ 25. The most frequent cause of macular edema

- A. Inflammatory disorder
- B. Epiretinal membrane
- C. After cataract surgery
- D. Acquired retinal degeneration
- E. Drug therapy

✓ 26. Flower petal pattern of fluorescein dye may be seen in

- A. Macular edema
- B. Retinal degeneration
- C. Macular hole
- D. Serous chorioretinopathy
- E. Retinoschisis

✓ 27. The characteristic finding on fundoscopy in myopic macular degeneration is

- A. Lacquer cracks
- B. Vogt's lines
- C. Macular star
- D. Cherry red spot
- E. Optic disc cupping

✓ 28. "Smoke stack" configuration of fluorescein dye is characteristic of

- A. Macular edema
- B. ~~Macular hole~~
- C. Central serous chorioretinopathy
- D. Retinoschisis
- E. Angioid streaks

29. Clinically significant diabetic maculopathy is defined as

- A. Retinal thickening within 500µm of fovea
- B. Retinal thickening of less than 1 disc diameter
- C. Intraretinal haemorrhages
- D. When there is venous beading
- E. When there is intraretinal microvascular abnormality

30. In type II DM

- A. Maculopathy is more common
- B. Proliferative retinopathy is more common
- C. Neovascular glaucoma is more common
- D. A and B
- E. All of the above

✓ 31. The most common macular dystrophy is

- A. Cone-Rod dystrophy
- B. Best disease
- C. Retinitis pigmentosa
- D. Gyrate atrophy
- E. Stargardt disease

✓ 32. The "bull's Eye pattern" of macula on fluorescein dye is characteristic of

- A. Cone-Rod dystrophy
- B. Best disease
- C. Retinitis pigmentosa
- D. Gyrate atrophy
- E. Stargardt disease

33. The earliest symptom of retinitis pigmentosa is

- A. Ring scotoma
- B. Nyctalopia (Night blindness) →
- C. Diplopia
- D. Blurred vision
- E. Dizziness

34. "Bone spicule formation" is characteristically seen in

- A. Cone-Rod dystrophy
- B. Best disease
- C. Retinitis pigmentosa
- D. Gyrate atrophy
- E. Stargardt disease

**KEYS POINTS:-**

- > Smoking is a proven risk factor for the development of all forms of macular degeneration.
- > Rhythmatogenous retinal detachment is the most common type of retinal detachment.
- > The two major complications of retinal vein occlusion are reduced vision from macular edema and neovascular glaucoma secondary to this neovascularization

**RETINA****ANSWERS AND REFERENCES**

- |   |   |                               |
|---|---|-------------------------------|
| 1. C<br>Refer p. 191 Vaughan                  | 2. C<br>Refer p. 190 Vaughan                    | 3. A<br>Refer p. 190 Vaughan  |
| 4. D<br>Refer p. 191 Vaughan                  | 5. C<br>Refer p. 191 Vaughan                    | 6. D<br>Refer p. 190 Vaughan  |
| 7. D<br>Refer p. 190 Vaughan<br>(Figure 1-17) | 8. C<br>Refer p. 190 Vaughan                    | 9. B<br>Refer p. 190 Vaughan  |
| 10. E<br>Refer p. 201 Vaughan                 | 11. A<br>Refer p. 201 Vaughan                   | 12. C<br>Refer p. 201 Vaughan |
| 13. A<br>Refer p. 198 Vaughan                 | 14. E<br>Refer p. 198 Vaughan                   | 15. B<br>Refer p. 194 Vaughan |
| 16. B<br>Refer p. 197 Vaughan                 | 17. D<br>Refer p. 218 Vaughan                   | 18. E<br>Refer p. 217 Vaughan |
| 19. D<br>Refer p. 217 Vaughan                 | 20. E<br>Refer p. 195 Vaughan                   | 21. C<br>Refer p. 195 Vaughan |
| 22. D<br>Refer p. 198 Vaughan                 | 23. B<br>Refer p. 199 Vaughan                   | 24. B<br>Refer p. 201 Vaughan |
| 25. C<br>Refer p. 205 Vaughan                 | 26. A<br>Refer p. 205 Vaughan<br>(Figure 10-26) | 27. A<br>Refer p. 194 Vaughan |
| 28. C<br>Refer p. 205 Vaughan                 | 29. A<br>Refer p. 195 Vaughan                   | 30. A<br>Refer p. 195 Vaughan |
| 31. E<br>Refer p. 208 Vaughan                 | 32. A<br>Refer p. 209 Vaughan                   | 33. B<br>Refer p. 210 Vaughan |
| 34. C<br>Refer p. 210 Vaughan                 |   |                               |

**LAST MINUTE POINTS: RETINA**

- > Haemorrhages in nerve fiber layer present as flame-shaped haemorrhages.
- > Non-proliferative is labeled severe when there are intraretinal haemorrhages in all four quadrants venous beading in two quadrants and intraretinal microvascular abnormality in one quadrant.
- > Proliferative diabetic retinopathy is more common in type 1 diabetics.
- > Massive vitreous hemorrhage causes sudden loss of vision.
- > Branch retinal vein occlusion involves mostly superotemporal veins. Where arteries cross veins.
- > Central retinal artery occlusion (CRAO) causes sudden painless loss of vision preceded by transient visual loss.
- > Cherry red spot is characteristic of CRAO.
- > CRAO is treated by paracentesis of anterior chamber. IV acetazolamide and inhaled CO<sub>2</sub> and oxygen mixture.
- > Retinosis causes an absolute scotoma in visual field.
- > Retinal detachment causes relative scotoma.
- > "Tobacco dust" is characteristic of retinal detachment
- > Central serous chorioretinopathy occurs in persons with type A personality, chronic steroid use, stress.
- > Stargardt disease is by far the most common macular dystrophy.
- > Cystoid macular edema is actually the collection of fluid in honey spaces of outer plexiform and inner
- > Cystoid macular edema occurs most commonly after



## SPECIAL SUBJECTS OF PAEDIATRIC INTEREST

1. In normal growing child, at what age visual acuity become 6/6?
  - A. 1 year
  - B. 2 years
  - C. 3 years ✓
  - D. 5 years
  - E. 10 years
2. Abnormally small eyes in which functions of eyes is normal are called
  - A. Microphthalmos
  - B. Nanophthalmos
  - C. Anophthalmos
  - D. Cryophthalmos
  - E. None of the above
3. The common cause of congenital cataract in developing countries is
  - A. Maternal rubella infection ✓
  - B. Hereditary cataracts
  - C. Congenital toxoplasmosis infection
  - D. Retinopathy of prematurity
  - E. Intrauterine CMV infection ✓
4. Inclusion blepharitis due to chlamydial infection has its onset between
  - A. Second and fifth day
  - B. Second and twenty first day
  - C. Fifth and fourteenth days
  - D. Tenth and thirtieth days
  - E. First and third days
5. Conjunctivitis of new born caused by gonococcal infection presents between
  - A. 2nd-5th day
  - B. 7th-21st day
  - C. 5th-14th day
  - D. 10th-30th day
  - E. 1st-3rd day

6. The major risk factor/s of retinopathy of prematurity is/are

- A. Small gestational age
- B. Low birth weight
- C. Maternal infection →
- D. A and B
- E. All of above

7. Differential diagnosis of leukocoria are all except

- A. Congenital cataract
- B. Retinopathy of prematurity
- C. Persistent hyperplastic vitreous
- D. Retinoblastoma
- E. Congenital glaucoma ✓

8. Retinal haemorrhages in children less than 3 years of age without external evidence of head injury is strongly suggestive of

- A. Hereditary DM
- B. Hereditary hypertension
- C. Shaken baby syndrome
- D. Retinal vein occlusion
- E. None of the above

## SPECIAL SUBJECTS OF PAEDIATRIC INTEREST

### ANSWERS AND REFERENCES

- |  |                              |                               |
|--|------------------------------|-------------------------------|
| 1. C<br>Refer p. 358 Vaughan<br>(Table 17-2) | 2. B<br>Refer p. 359 Vaughan | 3. A<br>Refer p. 360 Vaughan. |
| 4. C<br>Refer p. 362 Vaughan                 | 5. A<br>Refer p. 362 Vaughan | 6. C<br>Refer p. 363 Vaughan  |
| 7. E<br>Refer p. 363 Vaughan                 | 8. C<br>Refer p. 364 Vaughan |                               |

# OCULAR AND ORBITAL TRAUMA

1. In case of ocular trauma, ophthalmological examination should begin with

A. Slit lamp examination  
 B. Measurement and documentation of visual acuity  
 C. Ophthalmoscopy  
 D. Retinoscopy  
 E. Tonometry

2. The most common site of globe rupture is

A. Lower temporal quadrant  
 B. Upper temporal quadrant  
 C. Superoasal limbus  
 D. Inferonasal limbus  
 E. None of above

3. Investigation absolutely contra-indicated in case of foreign bodies to eye is

A. CT scan  
 B. Plain X ray  
 C. B-Scan  
 D. A-Scan  
 E. MRI

4. In case of chemical burns, the immediate step should be

A. Immediate tap water lavage  
 B. Immediate transport to hospital  
 C. Immediate patching of eye  
 D. Immediate lavage with glucose solution  
 E. Topical steroids at first step

# OCULAR AND ORBITAL TRAUMA

## ANSWERS AND REFERENCES

- |    |                      |    |                      |    |                      |
|----|----------------------|----|----------------------|----|----------------------|
| 1. | B                    | 2. | C                    | 3. | E                    |
|    | Refer p. 371 Vaughan |    | Refer p. 373 Vaughan |    | Refer p. 374 Vaughan |
| 4. | C                    |    |                      |    |                      |
|    | Refer p. 373 Vaughan |    |                      |    |                      |



# PREVENTIVE OPHTHALMOLOGY

1. One of the major causes of endophthalmitis after cataract surgery is
  - A. *Pseudomonas aeruginosa*
  - B. *S. aureus*
  - C. *S. epidermidis*
  - D. *E. Coli*
  - E. *Pneumococcus*
2. Solar retinitis is also known as
  - A. Eclipse retinopathy
  - B. Photic retinopathy
  - C. Aic eye
  - D. Welding eye
  - E. None of above
3. Incidence of suppurative keratitis is particularly high with
  - A. Hard Lenses
  - B. Daily wear contact lenses
  - C. Disposable contact lenses
  - D. Extended wear soft lenses
  - E. Spectacles
4. Which one of the following organisms is used to be common contaminant of ophthalmic solutions?
  - A. *S. aureus*
  - B. *Pseudomonas aeruginosa*
  - C. *S. epidermidis*
  - D. *Acanthamoeba*
  - E. *Toxoplasma*
5. The more practical method of sterilization of applanation tonometry tips is
  - A. Immersing it in alcohol and then drying it
  - B. Immersing it in hypochlorite and then drying it
  - C. By simply wiping with sterile water
  - D. By wiping with 70 % isopropyl alcohol swabs and then drying it

6. The best means of detecting primary open angle glaucoma early is
  - A. Performance of tonometry on all adults
  - B. Performance of direct ophthalmoscopy on all adults
  - C. A and B only
  - D. All of above
7. The best way to prevent amblyopia is to test the
  - A. Peripheral field of vision of all pre-school children
  - B. Pupillary light reflex of all pre-school children
  - C. Visual acuity of all pre-school children
  - D. Intra ocular pressure of all pre-school children
  - E. None of above
8. Vitamin A deficiency may occur as a result of
  - A. Deficient diets
  - B. Chronic alcoholism
  - C. Biliary obstruction
  - D. A and C
  - E. All of above

## PREVENTIVE OPHTHALMOLOGY

### ANSWERS AND REFERENCES

- |                      |                          |                      |
|----------------------|--------------------------|----------------------|
| 1. C                 | 2. A                     | 3. D                 |
| Refer p. 389 Vaughan | Refer p. 389 Vaughan     | Refer p. 390 Vaughan |
| 4. B                 | 5. E                     | 6. D                 |
| Refer p. 390 Vaughan | Refer p. 390-391 Vaughan | Refer p. 392 Vaughan |
| 7. C                 | 8. E                     |                      |
| Refer p. 393 Vaughan | Refer p. 393 Vaughan     |                      |



**STRABISMUS**

## 1. Strabismus is

- A. Always traumatic in origin
- B. Any deviation from perfect ocular alignment
- C. Reduced visual acuity in the absence of eye disease
- D. Always treated medically
- E. Synonymous with amblyopia

## 2. A deviation present only after binocular vision has been interrupted is called

- A. Heterotropia
- B. Heterophoria
- C. Latent strabismus
- D. A and C
- E. B and C

## 3. Strabismus is present in

- A. 1 % of children
- B. 2 % of children
- C. 4 % of children
- D. 8 % of children
- E. 10 % of children

## 4. Reduced visual acuity in the absence of detectable organic disease in one eye is

- A. Amblyopia
- B. Suppression
- C. Squint
- D. Anomalous retinal correspondence
- E. None of the above

## 5. Amblyopia is common in

- A. Exotropia
- B. Esophoria
- C. Exophoria
- D. Esotropia
- E. Exyclopia

## 6. Prolonged abnormal visual experience in a child under the age of 7 years may lead to

- A. Hyperopia
- B. Amblyopia
- C. Myopia
- D. Growth retardation
- E. Headache

## 7. Clinical causes of amblyopia include

- A. Visual deprivation
- B. Strabismus
- C. Un-equal refractive error
- D. All of above
- E. None of the above

## 8. Prominent epicanthal folds gradually disappear by

- A. 1-2 years of age
- B. 8-10 years of age
- C. 4-5 years of age
- D. 10-15 years of age
- E. 1-2 months of age

## 9. Which of the following is not included in "prism and cover tests"?

- A. Cover test
- B. Alternate uncover test
- C. Uncover test
- D. Alternate cover test
- E. Prism and alternate cover test

## 10. Sensory status of eye is generally fixed by the age of

- A. 2 years
- B. 3 years
- C. 5 years
- D. 8 years
- E. 10 years



11. Full time occlusion in treatment of amblyopia is done for how much duration?

- A. 1 month
- B. 6 months
- C. As many months as the child's age
- D. As many weeks as the child's age ✓

12. A person trained in methods of testing and treating patients with strabismus is known as

- A. Orthoptist
- B. Ophthalmologist
- C. Orthokinetic
- D. Optometrist
- E. None of the above

13. The most common type of strabismus is

- A. Exotropia
- B. Esotropia ✓
- C. Exophoria
- D. Esophoria
- E. Hyperopia

14. Prominent epicanthal folds sometimes give impression of esotropia. Which one of the following should be done to differentiate it from true esotropia?

- A. Fundoscopy
- B. Slit lamp examination
- C. Corneal light reflection test ✓
- D. Perimetry
- E. Visual acuity test

15. Closing one eye in bright light is characteristic sign of

- A. Esotropia
- B. Exophoria
- C. Esophoria
- D. Exotropia ✓
- E. Hypotropia

16. Almost all individuals have some degree of

- A. Esotropia
- B. Exotropia
- C. Heterophoria ✓
- D. Hypertropia
- E. Hypotropia

## STRABISMUS

### ANSWERS AND REFERENCES

- |                      |                      |                      |
|----------------------|----------------------|----------------------|
| 1. B                 | 2. A                 | 13. C                |
| Refer p. 238 Vaughan | Refer p. 238 Vaughan | Refer p. 238 Vaughan |
| 4. A                 | 5. D                 | 6. B                 |
| Refer p. 241 Vaughan | Refer p. 250 Vaughan | Refer p. 241 Vaughan |
| 7. D                 | 8. C                 | 9. B                 |
| Refer p. 241 Vaughan | Refer p. 252 Vaughan | Refer p. 242 Vaughan |
| 10. D                | 11. E ✓              | 12. A                |
| Refer p. 240 Vaughan | Refer p. 241 Vaughan | Refer p. 241 Vaughan |
| 13. B                | 14. C                | 15. D                |
| Refer p. 249 Vaughan | Refer p. 249 Vaughan | Refer p. 249 Vaughan |

16. C
Refer p. 257 Vaughan

### KEYS POINTS:-

- > Strabismus is misalignment may be in any direction inward, outward, upward or torsional.
- > Prism and cover tests for detection of angle of strabismus.
- > Types of strabismus non parietic (comitant) and parietic (non-comitant)
- > Heterophoria is the deviation of eyes.



# LASERS

1. The word LASER is an acronym for

- A. Light assisted stimulated emission of radiations
- B. Light amplification by stimulated emission of radiations
- C. Light absorption by stimulation of radiation
- D. Light assisted surgery emitting radiation
- E. Light associated subjective emission of radiation

2. The mechanisms of LASER are all except

- ☒ A. Photocoagulation
- ☒ B. Photodisruption
- ☒ C. Photoevaporation
- ☒ D. Photodecomposition
- ☒ E. Photodestruction

3. Retinal photocoagulation is best done with

- A. Q-switched Nd: YAG laser
- B. Argon laser
- C. Excimer laser
- D. CH<sub>2</sub> laser
- E. Holmium laser

4. The mechanism of laser used in the treatment of diabetic retinopathy is

- ☒ A. Photocoagulation
- ☒ B. Photodisruption
- ☒ C. Photoevaporation
- ☒ D. Photodecomposition
- ☒ E. Photodestruction

5. Q-switched Nd: YAG laser works on the principle of

- A. Photocoagulation
- ☒ B. Photodisruption
- ☒ C. Photoevaporation
- ☒ D. Photodecomposition
- ☒ E. Photodestruction

6. Peripheral laser iridotomy is best done with.

- A. Q-switched Nd: YAG laser
- ☒ B. Argon laser
- ☒ C. Excimer laser
- ☒ D. CO<sub>2</sub> laser
- ☒ E. Holmium laser

7. Lasers which are used for bloodless incisions work on the principle of

- A. Q-switched Nd: YAG laser
- B. Argon laser
- C. Excimer laser
- ☒ D. CO<sub>2</sub> laser
- ☒ E. Holmium laser

8. LASIK and LASEK are best done with

- A. Q-switched Nd: YAG laser
- B. Argon laser
- ☒ C. Excimer laser
- ☒ D. CO<sub>2</sub> laser
- ☒ E. Holmium laser



9. Excimer laser work on the principle of

- A. Photocoagulation
- B. Photodisruption → *MD-VAR-LASER*
- C. Photoevaporation
- D. Photodecomposition ✓
- E. Photodestruction

10. The most effective treatment for retinal and iris neovascularisation is

- A. Panretinal photodecomposition
- B. Panretinal photodisruption
- C. Panretinal photodestruction
- D. Panretinal photocoagulation ✓ *18/10/03*

## LASERS

### ANSWERS AND REFERENCES

- |   |   |   |
|---|---|---|
| <p>1. <b>B</b><br/>Refer p. 431 Vaughan</p> <p>4. <b>A</b><br/>Refer p. 431 Vaughan</p> <p>7. <b>D</b><br/>Refer p. 432 Vaughan</p> | <p>2. <b>E</b><br/>Refer p. 431 Vaughan</p> <p>5. <b>B</b><br/>Refer p. 432 Vaughan</p> <p>8. <b>C</b><br/>Refer p. 432 Vaughan</p> | <p>3. <b>B</b><br/>Refer p. 431 Vaughan</p> <p>6. <b>A</b><br/>Refer p. 432 Vaughan</p> <p>9. <b>D</b><br/>Refer p. 432 Vaughan</p> |
|---|---|---|

10.	<b>E</b>
	Refer p. 433 Vaughan

### KEYS POINTS:-

- The principal laser used in ophthalmic therapy are the thermal laser
- Green argon laser is the work horse of Argon laser.
- Nd:YAG laser is the principle laser of photodisruption
- Laser contain two gases (1) Argon (2) Fluoride

## ANATOMY AND EMBRYOLOGY OF THE EYE

1. "Blow out fractures" most frequently occur at

- A. Roof of orbit
  - B. Floor of orbit
  - C. Medial wall of orbit
  - D. Lateral wall of orbit
  - E. Posterior wall of orbit
- 4/4*  
*maxillary*

2. The strongest part of bony orbit is the

- A. Posterior portion of medial wall
- B. Floor
- C. Roof
- D. Anterior portion of lateral wall ✓
- E. Apex

3. Which of the following is/are contents of superior orbital fissure

- A. Lacrimal nerve
- B. Frontal nerve
- C. Trochlear and abducens nerve
- D. Nasociliary nerve
- E. All of the above

4. Inclusion conjunctivitis of newborn is papillary in nature rather than follicular because

- A. Infection is very severe in neonates
- B. Injection is mild in neonates
- C. Fibrous layer of conjunctiva develops after 2 to 3 months of age
- D. Adenoid layer of conjunctiva develops after 2 to 3 months of age ✓
- E. None of the above

5. The corneal stroma accounts for about \_\_\_\_ % of corneal thickness

- A. 50
- B. 20
- C. 70 ✓
- D. 90
- E. 60

6. Ground substance of cornea is composed of

- A. Glycoproteins
- B. Protoglycans ✓
- C. Clondroitin sulphate
- D. Hvaluronic acid
- E. Lipoproteins

7. About histology of cornea

- A. Endothelium is single layered
- B. Endothelial cells are lost with age
- C. Epithelium is 5 to 6 layers thick
- D. Stroma forms 90% of corneal thickness
- E. All of the above

8. The transparency of cornea is due to

- A. Its uniform thickness
- B. Avascularity
- C. Deturgescence
- D. All of above

9. About lens of eye, all are correct except

- A. Biconcave
- B. Avascular
- C. Colourless
- D. Transparent
- E. Suspended behind the iris

10. Outer one third of retina is supplied by

- A. Choriocapillaries ✓
- B. Branches of central retinal artery
- C. Extensions of muscular branches
- D. All of above
- E. A and B

11. The outer most layer of retina is

- A. Outer limiting membrane
- B. Inner limiting membrane
- C. Retinal pigment epithelium ✓
- D. Inner nuclear layer
- E. Outer nuclear layer

12. The fovea is supplied with

- A. Choriocapillaries only ✓
- B. Central retinal artery only
- C. A and B
- D. Extensions from muscular branches
- E. All of above

13. Vitreous is about \_\_\_\_ % water?

- A. 90
- B. 95
- C. 99 ✓
- D. 100
- E. 80

14. The longest and thinnest of ocular muscles is

- A. Superior rectus
- B. Inferior rectus
- C. Superior oblique ✓
- D. Inferior oblique
- E. Medial rectus



15. Following germ layer does not enter into the formation of eye?

- A. Mesoderm
- B. Ectoderm
- C. Neural crest
- D. ....
- E. .... ectoderm

16. The lacrimal and accessory lacrimal glands are derived from

- A. Corneal epithelium
- B. Iris
- C. Lid skin
- D. Lens
- E. Conjunctival epithelium

17. During gestation, corneal epithelium and endothelium are apparent at

- A. 2 weeks
- B. 4 weeks
- C. 6 weeks
- D. 12 weeks
- E. 24 weeks

18. Which of the following structure is not derived from neural crest?

- A. Corneal keratocytes
- B. Stroma of iris and choroid
- C. Corneal endothelium
- D. Optic nerve meninges
- E. Extraocular muscles

19. Which one of the following ocular structures contain highest concentration of protein?

- A. Cornea
- B. Lens
- C. Aqueous
- D. Vitreous
- E. Retina

20. Which of the following structures does not pierce the orbital septum?

- A. Lacrimal vessels and nerves
- B. Infra orbital vessels and nerves
- C. Supratrochlear artery and nerve
- D. Supra orbital vessels and nerves
- E. Infra trochlear nerve

## ANATOMY AND EMBRYOLOGY OF

### THE EYE

#### ANSWERS AND REFERENCES

1. B	2. D	3. E
Refer p. 01 Vaughan	Refer p. 01 Vaughan	Refer p. 03 Vaughan
4. D	5. D	6. B
Refer p. 06 Vaughan	Refer p. 08 Vaughan	Refer p. 08 Vaughan
7. E	8. D	9. A
Refer p. 08 Vaughan	Refer p. 08 Vaughan	Refer p. 10 Vaughan
10. A	11. C	12. A
Refer p. 12 Vaughan	Refer p. 12 Vaughan	Refer p. 12 Vaughan
13. C	14. C	15. D
Refer p. 13 Vaughan	Refer p. 14 Vaughan	Refer p. 23 Vaughan
16. E	17. C	18. E
Refer p. 23 Vaughan	Refer p. 23 Vaughan	Refer p. 23 Vaughan
19. B	20. B	
Refer p. 25 Vaughan	Refer p. 17 Vaughan	

## BLINDNESS

1. WHO definition of blindness is

- A. Visual acuity less than 6/60 ✓
- B. Visual acuity less than 3/60
- C. Visual acuity less than 5/60
- D. Visual acuity less than 20/200
- E. Visual acuity less than 01/60

2. According to WHO surveys, approximate prevalence of blindness in Pakistan is

- A. 1 %
- B. 2 %
- C. 3 %
- D. 5 % →
- E. 0.5 %

3. WHO estimates that up to \_\_\_\_ % of blindness in developing countries is avoidable

- A. 50 %
- B. 60 %
- C. 70 %
- D. 80 % →
- E. 90 %

4. The most common cause of blindness is Pakistan is

- A. Refractive errors
- B. Cataract
- C. Corneal opacities
- D. Diabetic retinopathy
- E. Glaucoma

5. WHO has recommended "SAFE STRATEGY" for

- A. Cataract
- B. Glaucoma
- C. Trachoma →
- D. Xerophthalmia
- E. Diabetic retinopathy

6.

Cataract accounts for at least \_\_\_\_ % of blindness worldwide

- A. 40 % →
- B. 50 %
- C. 60 %
- D. 70 %
- E. 80 %

## BLINDNESS

### ANSWERS AND REFERENCES

- |   |   |   |
|---|---|---|
| <p>1. B<br/>Lecture notes</p> <p>4. B<br/>Lecture notes</p> | <p>2. B<br/>Refer p. 385 Vaughan</p> <p>5. C<br/>Refer p. 386 Vaughan</p> | <p>3. D<br/>Refer p. 385 Vaughan</p> <p>6. A<br/>Refer p. 386 Vaughan</p> |
|---|---|---|

### KEYS POINTS:-

- SAFE strategy of WHO stands for:
- > 1. Surgery for Trachiasis
  - > 2. Antibiotics Administration
  - > 3. Face washing
  - > 4. Environmental eg sanitary condition



## OPHTHALMIC THERAPEUTICS

1. Which of the following is a mydriatic with no cycloplegic effect?
  - A. Phenylephrine
  - B. Atropine
  - C. Scopolamine
  - D. Homatropine
  - E. Cyclopentolate
2. All parasympathomimetics decrease IOP by
  - A. Decrease in production of aqueous
  - B. Increase uveoscleral outflow
  - C. Increase outflow through trabecular meshwork
  - D. Inhibition of carbonic anhydrase
3. Timolol should be prescribed cautiously to patients with
  - A. Asthma
  - B. Heart failure
  - C. Aphakic glaucoma
  - D. A and B only
  - E. All of the above
4. One important principle in avoiding the systemic side effects from topical ophthalmic medications is
  - A. Proper instillation of eye drops
  - B. Prevent overdosing
  - C. Puncta should be closed during eye drop
  - D. Use of topical anaesthesia with the eye drop
  - E. None of the above

5. The adverse effects of chloroquine is/are
  - A. Corneal haziness
  - B. Loss of central vision
  - C. Macular edema
  - D. All of the above
6. Papilledema may be caused by which one of the following drugs
  - A. Amiodarone
  - B. Methyldopa
  - C. Tetracycline
  - D. Streptomycin
  - E. Rifampicin
7. Amiodarone causes
  - A. Vortex keratopathy
  - B. Thyroid ophthalmopathy
  - C. Optic neuropathy
  - D. A and C only
  - E. All of the above

## ANATOMY AND EMBRYOLOGY OF THE EYE

### ANSWERS AND REFERENCES

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. <b>A</b><br/>Refer p. 413 Vaughan</li> <li>4. <b>B</b><br/>Refer p. 425 Vaughan</li> </ol> | <ol style="list-style-type: none"> <li>2. <b>C</b><br/>Refer p. 413 Vaughan</li> <li>5. <b>E</b><br/>Refer p. 426 Vaughan<br/>Table 22-3</li> </ol> |
| <ol style="list-style-type: none"> <li>7. <b>E</b><br/>Refer p. 426 Vaughan<br/>Table 22-3</li> </ol>                                | <ol style="list-style-type: none"> <li>3. <b>D</b><br/>Refer p. 415 Vaughan</li> <li>6. <b>C</b><br/>Refer p. 426 Vaughan<br/>Table 22-3</li> </ol> |

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