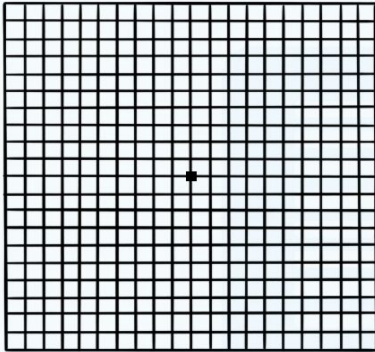
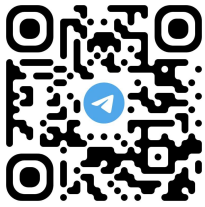
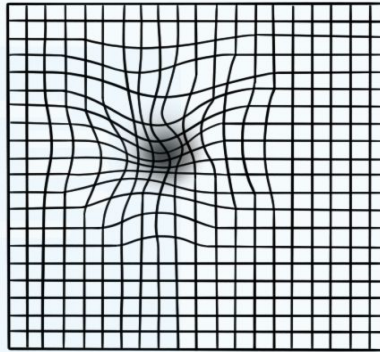


# OPHTHALMOLOGY



Normal Vision



Vision with Wet  
Macular Degeneration



1. 5-year-old boy is hit in the eye with pencil in left eye while fighting with elder sister. 2 weeks later he develops photophobia and visual blurring in the contralateral eye. Which of the following is not correct about this condition?

Histopath

- a. Dalen-Fuch nodules on slit lamp examination
- b. Earliest sign is retrolental flare in non-injured eye
- c. Granulomatous panuveitis in non-injured eye
- d. Decreased power of accommodation ✓

Sym. ophthalmitis



## 2. Which of the following investigations is best investigation about best disease?

- a. ERG showing arden ratio  $< 1.5$
- b. ERG showing arden ratio  $> 1.5$
- c. EOG showing arden ratio  $< 1.5$
- d. EOG showing arden ratio  $> 1.5$

photoreceptors

Hereditary Macular  
dystrophy

\* BEST 1 gene

\* chloride channel in  
RPE

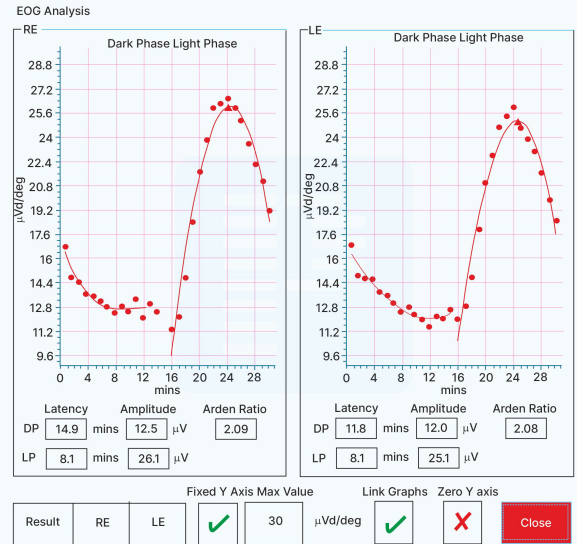
\* light PEAK  $< 1.5$   
dark Trough

\* Fundus: macula  
egg yolk  
app N

*Electroretinogram tests photoreceptors, so it stays normal*

In Best disease light rise is reduced or absent

Fundus shows scrambled egg/egg yolk appearance



### 3. Most important determinant of development of diabetic retinopathy?

- a. Duration of diabetes
- b. Type of diabetes
- c. Severity of diabetes
- d. Level of glycemic control of diabetes

\* T1DM = 5y

T2DM = 15-20yrs

HbA<sub>1c</sub>

#### 4. Candle wax drippings on fundus examination are seen in which of the following?

- a. Young female with blurring of vision and loss of color vision
- b. Young male with HIV positive status and low CD4 count
- c. Young female with bilateral hilar lymphadenopathy and elevated ACE levels
- d. Young male with unilateral hilar lymphadenopathy and cavitation in lung

↓  
Eale's disease  
TB

Soroid eye : \*

- uveitis
- Koeppke nodules
- Busacca nodules

\* periphlebitis  
candle wax dripping

5. Sudden painless loss of vision in young female patient with fundus showing white retina with attenuated arterioles, cherry red spot and relative afferent pupillary defect is seen in which of the following?

a. CRVO

b. CRAO

c. Retinal vein occlusion

d. Branched retinal vein occlusion

flame hemorrhages, Cattle Trucking  
blood & THUNDER

DLR: ⊖

CLR: ⊕

II

III

6. Salu sign and Gunn sign on fundus examination is seen in which of the following patient?

- a. Hypertension
- b. Multiple sclerosis
- c. Neuromyelitis optica
- d. AIDS

AV nicking

earliest

focal attenuation of  
ARTERIOLES

7. Which of the following is not correct about basics of refraction in human eye?

- a. P III and P IV images are absent in aphakia ✓
- b. Maximum refraction is from anterior corneal surface ✓
- c. Streak retinoscopy reflex moves in same direction in myopia < 1D ✓
- d. If axial length of eye changes by 3 mm then power changes by 1 dioptre

1mm

3D

## CMV Retinitis \*

8. AIDS patient presents with visual blurring. Fundus examination shows cottage cheese and tomato ketchup appearance. Which of the following is investigation of choice

- a. QNAT of aqueous humour
- ☒ b. QNAT of vitreous humour
- c. QNAT of blood sample
- d. QNAT on corneal scraping

↓  
BV in vitreous chamber



↓  
9. You are doing fundus examination in a child with diabetic mellitus with HbA1c of 10%. He complains of floaters in the eye. Which of the following is a pure mydriatic?

- a. Tropicamide
- b. Phenylephrine
- c. Cyclopentolate
- d. Homatropine

MYDRIASIS + PARALYSIS OF ACCOMODATION

a, c, d

Refraction Testing \*

**10. Myopia is the most common refractive error. Which of the following is correct about it?**

- a. Silk shot retina
- b. Pseudo papillitis
- c. Predisposition to development of PACG
- d. Foster Fuch spots at the macula

HYPERMETROPIA  
small eye: PACG

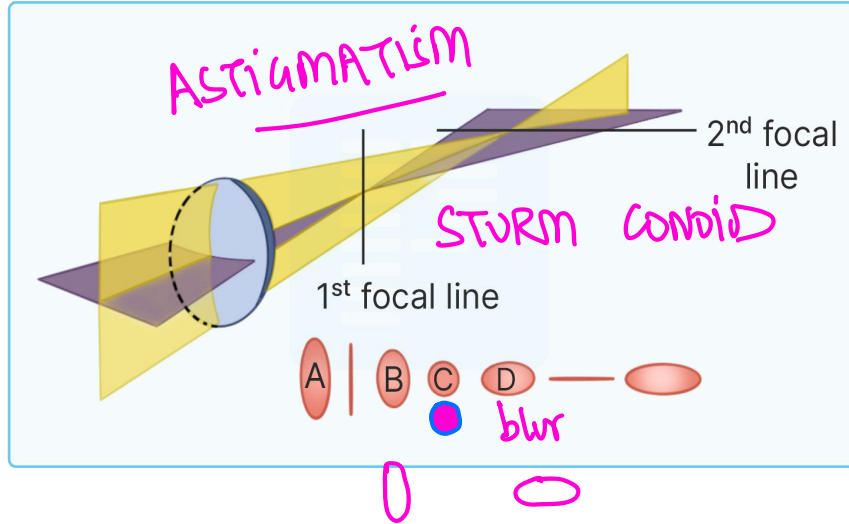
11. Which of the following shows circle of least diffusion:

a. A

b. B

c. C

d. D



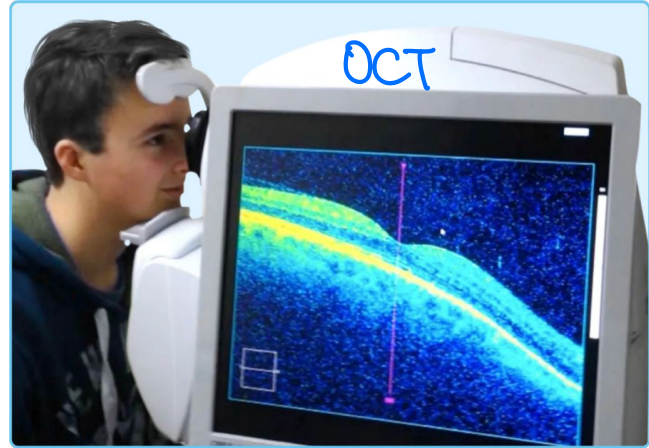
**12. Which type of spectacle lens is suitable for sports persons?**

- a. Crown glass
- b. CR 39 plastic lens
- c. Polycarbonate
- d. Polychromate

*Polychromatic*

**13. Which of the following is correct about the technique shown below**

- a. Optical coherence tomography to study retinal nerve fiber layers
- b. Optical coherence tomography to study corneal topography
- c. Optical coherence tomography to study corneal endothelial layer
- d. Optical coherence tomography to study field of vision



14. 30-year-old female patient comes with markedly blurred vision and eye pain. On examination there is no discharge but extensive ciliary congestion is noted and cornea is hazy and pupil is vertically oval and fixed. Which of the following is correct about this case?

a. Anterior uveitis →  FESTONED PUPIL

b. Posterior uveitis

c. Glaucoma



CILIARY Block: ACG: iv Mannitol  
PILOCARPINE

d. ~~Trachoma~~

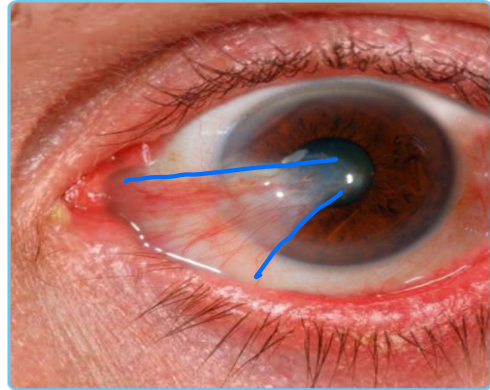
**15. Horner tranta spots at the limbus are seen in**

- a. VKC
- b. Trachoma
- c. Giant papillary conjunctivitis
- d. Parinaud oculoglandular conjunctivitis

16. A patient presents with the following lesion. Which is not correct about it?

- a. Elastotic degeneration of collagen ✓
- b. Stockers line with iron deposition is seen ✓
- c. Astigmatism ✓
- d. Yellow elevated triangular nodule adjacent to limbus

↓  
Pingecula

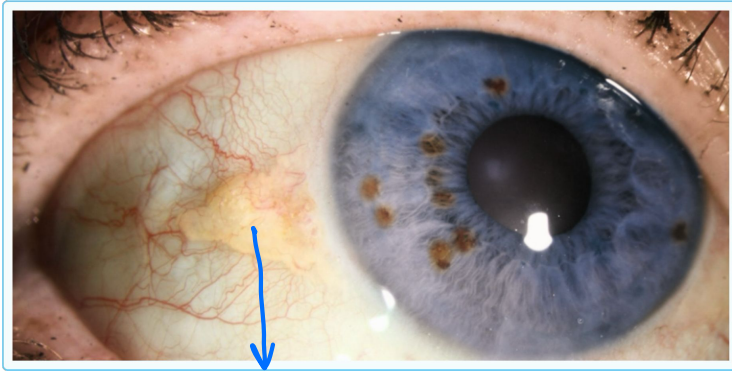


\* PTERGIUM

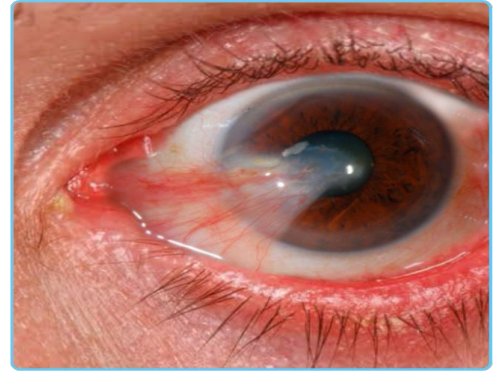
Mitomycin eye drops

-C



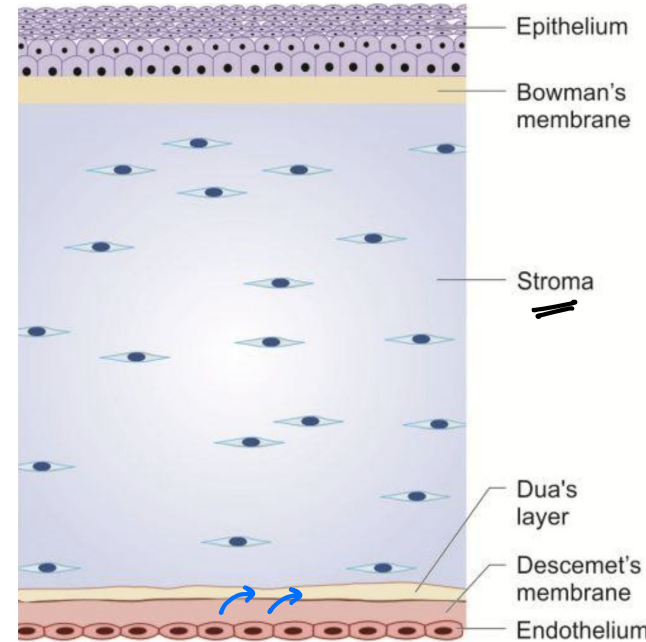


Pinguecula



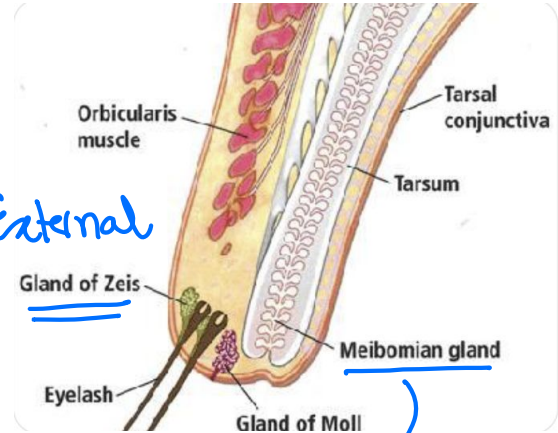
**17. All are correct about layers of cornea except?**

- a. Metabolically most active layer is endothelium ✓
- b. Collagen type 1 gives corneal transparency ✓
- c. Bowman layer once eroded does not regenerate ✓
- d. Dua layer readily regenerates



## 18. Which of the following is correct about staphyloma?

- a. Local eye infection of meibomian gland by staph aureus ✓
- b. Local eye infection of gland of Zeiss by staph aureus ✓
- c. Local bulging of cornea lined by uveal tissue
- d. Local bulging of lens lined by uveal tissue



External

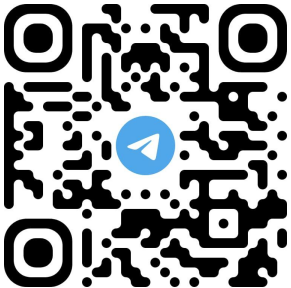
INTERNAL  
HORDIUM  
CHALAZION

19. Which of the following is leading eye manifestation of rheumatoid arthritis?

- a. Uveitis
- b. Scleromalacia perforans ← Characteristic
- c. Scleritis
- d. Keratoconjunctivitis sicca ← M/C

20. Which of the following is not correct about lens anatomy?

- a. Lens is least radiosensitive structure of eye
- b. Lens capsule is thickest membrane in the body ✓
- c. Suspensory ligament of zinn connects the ciliary body to lens ✓
- d. Yellowing of lens with age is due to accumulation of urochromes ✓



21. Which of the following is the most visually debilitating cataract?

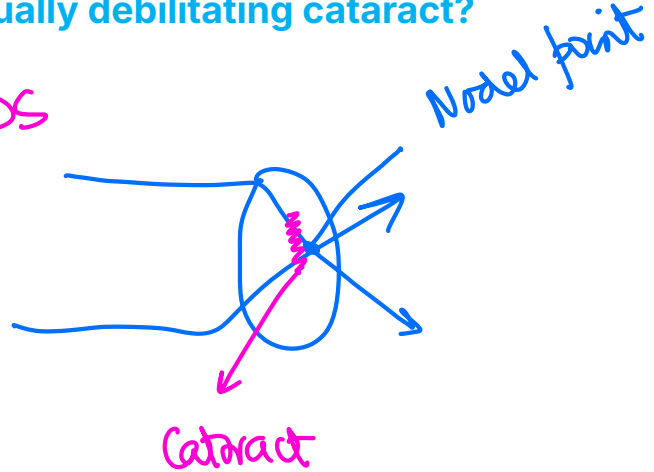
a. Anterior subcapsular cataract

b. Posterior subcapsular cataract

c. Syndermatotic cataract

d. Morgagnian cataract

← STEROIDS



22. Leading complication of cataract surgery is?

a. Endophthalmitis *life threatening*

b. UGH syndrome

c. Cyanopsia

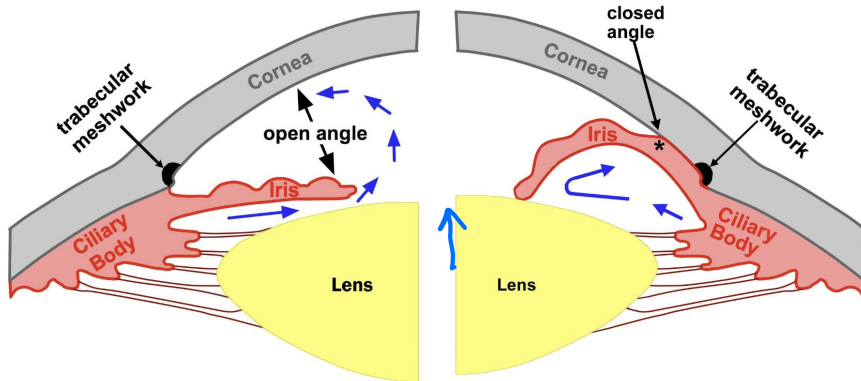
d. Posterior capsule opacification

→ 10 Povidone iodine  
Conj. Sac

### 23. Inverse glaucoma is seen with which of the following?

- a. Weil Marchesani syndrome
- b. Homocystinuria
- c. Aphakia
- d. Marfan syndrome

\* MICROSPHEROPHAKIA  
\* downward ectopic lens  
\* ACG





24. 50-year-old female comes with daily headaches, frequent change of presbyopic glasses with progressive visual loss. Slit lamp examination is normal and fundus shows vertically oval cupping of optic disc. Which of the following conditions is Likely responsible for this presentation?

long History +

- a. Mature cataract
- b. Hypermature cataract
- c. PACG
- d. POAG

25. Which of the following drugs acts by increase of aqueous outflow through direct action of trabecular meshwork and Schlemm canal cells?

- a. Prostaglandin analogs
- b. Rho kinase inhibitors
- c. Alpha adrenergic agonists
- d. Carbonic anhydrase inhibitors

NETARSUDIL

26. Which of the following is correct description of glaucoma caused by dislocation of lens into the Anterior chamber?

a. Phacomorphic glaucoma

b. Phacoanaphylactic glaucoma

c. Phacotopic glaucoma *ectopic*

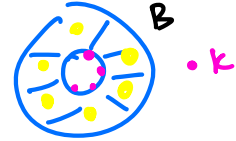
d. Lens particle glaucoma

BUSSACA nodule

27. Which of the following is not a feature of anterior uveitis?

- a. Koppe nodules on surface of iris and away from pupil
- b. Seclasio pupillae are posterior synechiae
- c. Festooned pupil due to posterior synechiae ✓
- d. Aqueous cells due to disease activity ✓

Koeppe = pupillary margin



28. Which of the following is best method to prevent acute postoperative endophthalmitis?

- a. Povidone iodine in conjunctival sac
- b. Saturated solution of potassium iodide in conjunctival sac
- c. Intra-vital injection of ceftazidime and vancomycin
- d. Intra- vitreal injection of meropenem and vancomycin

29. Which of the following methods is best for study of choroid vasculature?

a. Fundus *optic disc*

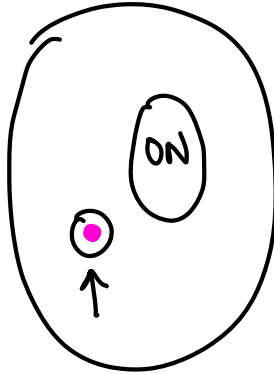
b. Fundus fluorescein angiography *fundus blood supply: CSR | CMF*

☒ c. Indocyanine green angiography

d. Optical coherence tomography *x Retinal study*

### 30. Most sensitive part of retina is?

- a. Optic disc
- b. Macula densa
- c. Macula lutea
- ☒ d. Fovea centralis





**31. Pseudo purtscher's retinopathy is seen in which of the following conditions?**

- a. Head injury
- b. Chest trauma
- ☒ c. Fat embolism
- d. Best disease





### 32. Peaud orange appearance of retina is seen in?

- a. ~~Purtschner retinopathy~~
- b. ~~Diabetic retinopathy~~
- c. Tuberous sclerosis
- (d.) Angioid streaks

WUNDER  
- rich sym

brain : Subependymal astrocytoma  
kidney : angiomyolipoma  
heart : Rhabdomyoma  
eye : Astrocystic Hamartoma  
Mulberry lesions

### 33. Which is not a feature of Trachoma?

- a. Trichiasis → ingrown eye lashes
- b. Entropion FIBROSIS
- c. Alkaline tears VKC
- d. Corneal opacity

34. On slit lamp biomicroscopic finding, Fleischer ring is found in:

a. Keratoconus

b. Wilson disease

KF Ring

c. Old corneal opacity

d. Nebula

### 35. Dua's layer of cornea lies between?

- a. Substantia propria and descemet membrane
- b. Descemet membrane and Endothelium
- c. Bowman layer and Substantia propria
- d. Bowman layer and endothelium

EDDU

**36. Pannus formation is seen in?**

a. Herpes simplex keratitis



dendritic ulcer

b. Ulcus serpens



c. Anterior staphyloma



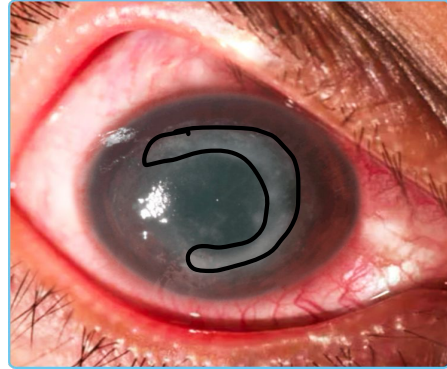
corneal tissue + uveal tissue

d. Riboflavin deficiency



37. A 16-year-old girl using soft contact lens went for swimming lessons without removing the contact lens. After few days she is having severe pain in both eyes with corneal ring infiltrates and radial keratoneuritis. Which is best for management of this case?

- a. Change to hard contact lens
- b. Penetrating keratoplasty
- c. Riboflavin eye drops
- ☒ d. Polyhexamethylene biguanide eye drops



\* Naegleria fowleri  
Amoebic meningoencephalitis

\* ACANTHAMOEBA KERATITIS

### 38. Uyemura's fundus is seen in?

- a. Retinal degeneration
- b. Retinal detachment
- ☒ c. Vitamin A deficiency
- d. Riboflavin deficiency

└─ B<sub>2</sub> ↓

- CIRCUM CORNEAL VASCULARIZATION
- PANNUS

XN

XIB

X<sub>S</sub> : Corneal scarring

X<sub>F</sub> : fondus

### 39. Earliest fundus finding of hypertension

- a. Cotton wool spots
- b. Micro aneurysm formation
- ☒ c. Focal attenuation of arterioles
- d. Dot blot hemorrhages



↓  
40. Alport syndrome leads to all of the following except?

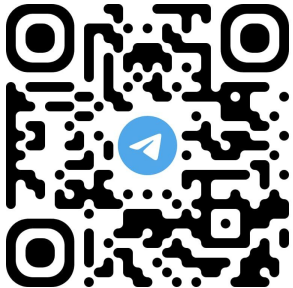
a. SN deafness ✓

b. Hematuria ✓

c. ESRD

d. Posterior Lenticonus  
ANTERIOR

- $\alpha 5$  chain of TYPE IV collagen
- COL4A5 gene
- XLD XLR AR AD
- NEVER Recurs after kidney Tx



41. A baby born to TORCH positive mother is having the following presentation. Which of the following is the correct intervention for this child?



- a. Lens aspiration with IOL implantation within 4-6 months of life
- ☒ b. Lens aspiration with IOL implantation within 4-6 weeks of life
- c. Lens aspiration with IOL implantation after 6 weeks of life
- d. Lens aspiration with IOL implantation within 4-6 month of life

cong. cataracts

✓ ✓  
**42. 1-year old boy has excessive lacrimation, photophobia and blepharospasm. Which is not correct about the condition shown?**

- a. Haab striae ✓
- b. Hazy cornea ✓
- c. Myopia ✓
- d. Needs Drainage implants



Buphthalmos

✓  
43. 2-day old Neonate is brought with bilateral copious purulent discharge with eyelid edema. Treatment is?

- a. Ceftriaxone *single dose*
- b. Azithromycin
- c. Acyclovir
- d. Gentamycin

**44. Relative afferent pupillary defect is seen in?**

- ☒ a. Optic nerve glioma
- b. Iridocyclitis
- c. Brain stem stroke
- d. Pituitary adenoma

✓  
45. Patient presents with acute red eyes. Near and distant Vision is normal.  
which of the following is likely cause?

- a. Acute Iridocyclitis
- b. Angle closure glaucoma
- c. Corneal abrasion
- d. Acute conjunctivitis

vision affected

**46. Mitomycin C eye drops are used in management of?**

a. Pingecula

☒ b. Pterygium

c. Keratomalacia

d. Post LASIK



**47. Tubular vision is not seen in?**

a. Retinitis Pigmentosa 

b. High myopia R.D → 

**c.** Pan-retinal photocoagulation

d. Advanced Glaucoma 



48. Hudson Sthali line contains?

aging

- a. Iron deposits
- b. Melanin deposits
- c. Copper deposits
- d. All of the above

#### 49. Blood and thunder fundus is seen in?

a. Non ischemic CRVO

☒ b. Ischemic CRVO

c. Branch retinal vein occlusion

d. Central retinal ~~artery~~ occlusion *pale white*



## 50. Not a feature of triad of Retinitis Pigmentosa?

- a. Arteriolar Attenuation ✓
- b. Bone Spicule Pigmentation ✓
- c. Waxy Pallor of optic Disc ✓

d. Tessellated fundus Myopia



P2PCA #



MCA ✓

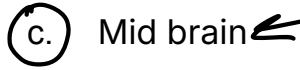
The tessellated fundus (also called "tigroid" or "mosaic" fundus) is an eye appearance where the large underlying choroidal blood vessels are visibly prominent through the retinal pigment epithelium

### 51. Site of lesion in Argyll Robertson pupil is?

- a. Optic nerve
- b. Retina
- c. Mid brain
- d. Occipital cortex

Accommodation Reflex (+)

pupillary Reflex (-)



52. Cotton wool spots are found in which layer of retina?

- a. Retinal nerve fibre layer
- b. Outer plexiform layer
- c. Inner nuclear layer
- d. Retinal pigmentary epithelium

CORN

DM:

MAIN

Micro Aneurysm  
inner nuclear layer

53. Best for diagnosis of dry eyes is?

- a. Alcian blue
- b. Fluorescein dye
- c. Rose Bengal dye
- d. Slit lamp biomicroscopy

SJOERGEN

1. SCHIRMER :  $< 5\text{mm}$  wet at 5min

2. TBUT Tear break up  $< 10\text{ sec}$   
fluorescein dye put & evaporation  
seen

order of dye : FLOWER

- 1. Fluorescein
- 2. Lissamine
- 3. Rose bengal



**54. Oil drop sign on direct ophthalmoscopy is seen in?**

- a. ~~Galactosemia~~
- ☒ b. Keratoconus
- c. Stromal keratitis
- d. Menke disease



**55. Binocular vision with stereopsis in children is fully developed by?**

- a. 6 months
- b. 1 year
- ☒ c. 7 year
- d. 10 years

↳ Binocular vision +  
Snellen charts can be used.

56. All of the following lead to ptosis except?

a. M. Gravis



b. Horner syndrome



Müller muscle #

c. Third nerve palsy



LPS muscle #

d. Grave's disease

(\*)

57. The angle subtended at 6m for vision of 6/60 in Snellen chart is \_\_\_\_\_ minutes

- a. 5
- b. 10
- c. 20
- d. 50

Fig. 17.17: Specular microscopic photography. Normal endothelial cells

Fig. 17.19: Construction of angle of 1 minute. Varying distance from 36 m to 6 m.

### 5.1 Snellen's Chart

|                              | Angle subtended at 6 m | Angle subtended at 6 m                                                                                   |
|------------------------------|------------------------|----------------------------------------------------------------------------------------------------------|
| 6/60 letter (largest letter) | 50 minutes ✓           | The Snellen chart is designed so that the angle subtended by the 6/60 letter at 6 m is 5 minutes of arc. |
| 6/36 letter                  | 30 minutes             | At 36 m, the angle subtended by the 6/36 letter is 5 minutes of arc.                                     |
| 6/24 letter                  | 20 minutes             | At 24 m, the angle subtended by the 6/24 letter is 5 minutes of arc.                                     |
| 6/18 letter                  | 15 minutes             | At 18 m, the angle subtended by the 6/18 letter is 5 minutes of arc.                                     |
| 6/12 letter                  | 10 minutes             | At 12 m, the angle subtended by the 6/12 letter is 5 minutes of arc.                                     |
| 6/6 letter                   | 5 minutes              | At 6 m, the angle subtended by the 6/6 letter is 5 minutes of arc.                                       |

nupil ca

**58. Donor cornea is harvested from cadaveric donors up to \_\_\_\_ hours?**

a. 1

b. 2

c. 3

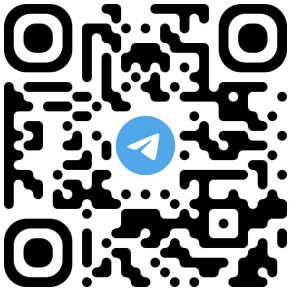
☒ d. 6

**59. Vossius ring is seen on?**

- a. Anterior lens capsule due to trauma
- b. Posterior lens capsule due to trauma
- c. Anterior lens capsule due to usage of ocular steroids
- d. Posterior lens capsule due to usage of ocular steroids

**60. Retinopathy of prematurity is seen due to?**

- a. Deficiency of oxygen
- ☒ b. Excess of oxygen
- c. Deficiency of carbon dioxide
- d. Excess of carbon dioxide



**61. Least radiosensitive cells in retina are?**

- a. Rods
- b. Cones
- ☒ c. Ganglion cells
- d. Pigment epithelium

**62. Headlight in fog appearance on fundus examination is found in?**

- a. Rubella
- b. CMV
- c. Best disease
- ☒ d. Toxoplasmosis



63. Diplopia on looking down is due to involvement of?

- a. Superior oblique muscle
- b. Superior rectus muscle
- c. Inferior rectus
- d. Inferior oblique

**64. Thinnest wall of orbital wall?**

a. Lateral wall

☒ b. Medial wall

c. Roof

d. Floor

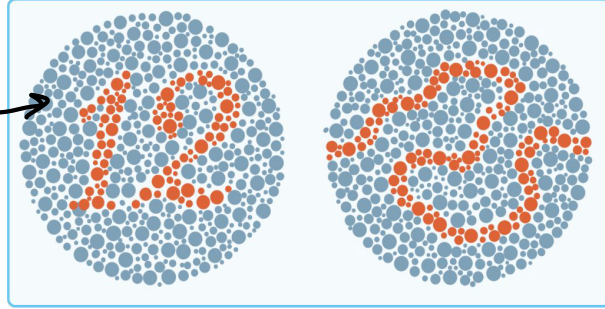
65. Which of the following cells process information regarding ability to read slide below?

a. Magnocellular cells *MOTION detection*

**b.** Parvocellular cells

c. Purkinje cells

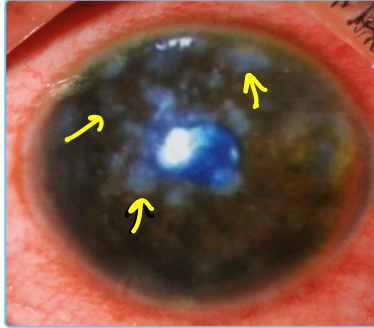
d. Pyramidal cell



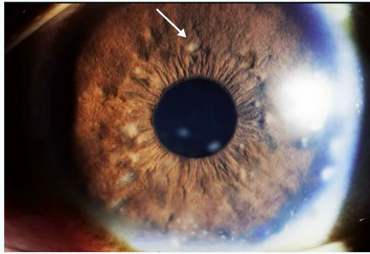
66. What does the image show?

pupillary border

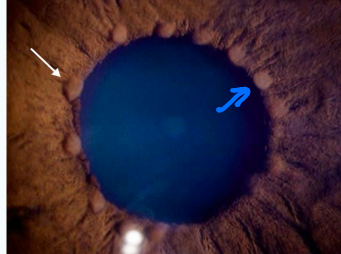
- a. Koeppe nodules
- b. ~~Dendritic keratitis~~
- c. Lisch nodules IRIS
- d. Nummular keratitis



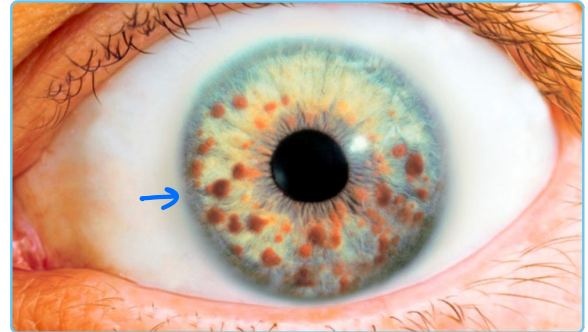
- Nummular keratitis is a condition characterized by multiple, coin-shaped opacities (subepithelial infiltrates) in the cornea. It is typically a sign of an underlying viral or inflammatory condition, rather than a disease itself



Busacca's nodules:  
on the surface of iris



Koeppe's nodules:  
at pupillary margin

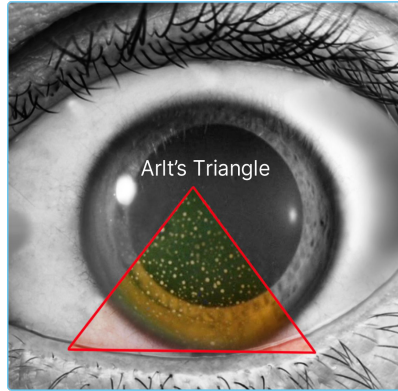


67. Arlt triangle is seen with?

- a. Iridocyclitis
- b. Scleritis
- c. Sympathetic ophthalmitis
- d. Foster Fuch Kennedy syndrome

— Papillitis

— Palpilledema



KP



**68. During bridle suture during cataract surgery which muscle is likely to be injured?**

- a. Inferior rectus
- ☒ b. Superior rectus
- c. Inferior oblique
- d. Superior oblique

**69. Absolute contraindication for LASIK is? \***

a. Age <18 years

☒ b. Keratoconus

c. Pregnancy

d. Age > 50 years



**70. A 50-year-old type II Diabetes mellitus patient with HbA1c = 11% has developed complete loss of vision in left eye. On examination a vitreous haemorrhage is noted. Which is the best treatment for managing this patient?**

- a. Pan-Retinal photocoagulation
- b. Intra-Viteal Bevacizumab
- c. Resolves spontaneously
- ☒ d. Pars plana vitrectomy

**71. Which cells of retina produce action potential?**

- a. Outer plexiform
- b. Inner nuclear
- ☒ c. Ganglion cells
- d. Retinal pigmentary epithelium

72. 60-year-old woman went to cinema theatre to watch a movie with her grandchildren. Midway she experienced headache, blurring of vision and vomiting. On examination in E.R she has ciliary congestion with mid dilated vertically fixed pupil with poor reaction to light. GCS = 13/15 and plantars are flexor. Which is the first step in management of this patient?

a. Urgent fundus examination

b. Osmotic diuretics

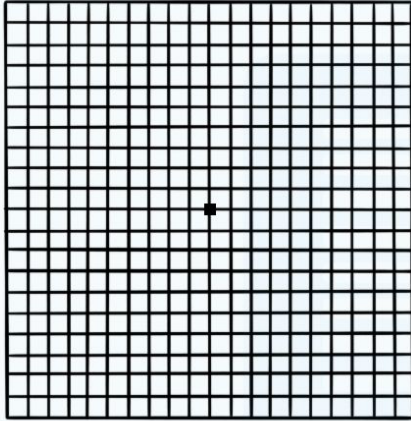
c. NCCT head

d. Optical coherence tomography

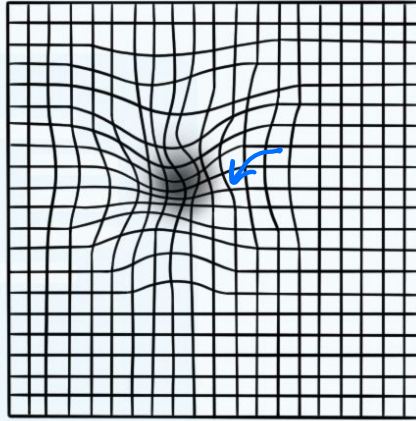
ACG

### 73. Amsler grid is used to detect?

- a. Macular degeneration
- b. Optokinetic nystagmus
- c. Corneal topography
- d. Field of vision



Normal Vision



Vision with Wet  
Macular Degeneration

\*

74. Which is correct about this examination?

- a. Inverted real image
- b. Magnification 5 times
- c. Good depth perception ✓
- d. Area of field of focus is 2-disc diameters

DEV 15  
===

direct opthal  
is 15 Times  
magnified

Erect  
virtual

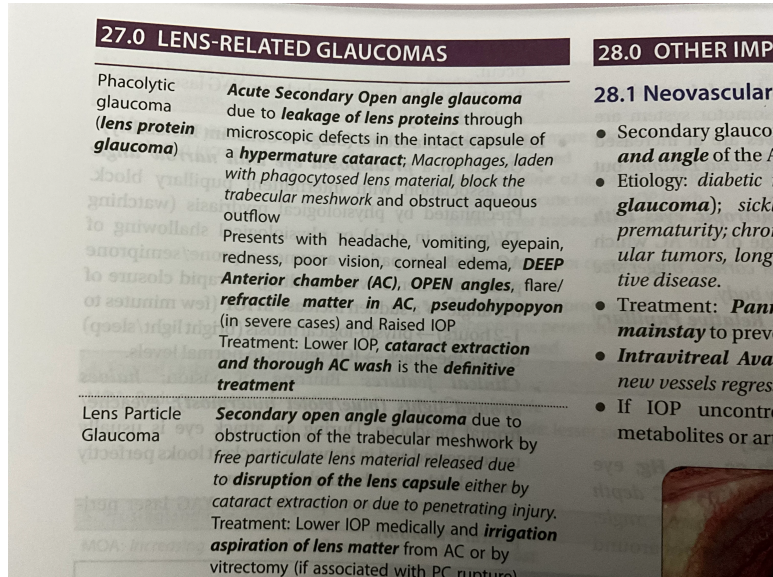
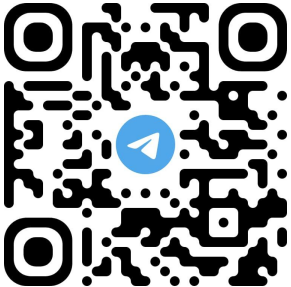




## 75. Deep anterior chamber on gonioscopy with open angles is seen in?

- a. Iris bombe
- b. Phacolytic glaucoma**
- c. Phacomorphic glaucoma
- d. Normal tension glaucoma

leakage of lens proteins



**THANK YOU**