EYELID/LACRIMAL SYSTEM

1. Tumors

1. A sixty years old farmer presents with the complaint of slow growing nodule with ulcerated center, for the last five years, at the temporal side of his right lower lid. It is itching and sometimes have a trivial bleeding .Its edges are rolled and hard. There is no local lymphadenopathy. What is your provincial diagnosis?
a. Squamous cell Carcinoma +T
b. Basal cell carcinoma
c. Molluscum contagiosum
d. Solar burn in the wart
e. Sebaceous carcinoma

2. A 70 years old lady has an ulcerated nodular mass on her right medial lower eyelid for the last 4 years. The central ulceration has raised rolled edges with dilated blood vessels over the lateral margins. Preauricular and submandibular lymph nodes are not palpable. The most likely diagnosis is:
a. Basal Cell Carcinoma
b. Kaposi Sarcoma
c. Merkle Cell Tumor
d. Sebaceous GlandCarcinoma
e. Squamous Cell Carcinoma

3. A 70 years -old man, farmer by occupation, presents to you in the OPD with a small shiny nodule, firm in consistency with dilated blood vessels on the surface of the lower eyelid. The lymph nodes are normal. The lesion is not painful but is increasing in size and beginning to bleed sometimes. Which of the following conditions come to your mind?
a. Actinic keratosis
b. Basal cell carcinoma
c. Melanoma
d. Sebaceous gland carcinoma

4. A 50 year-old female presents with mass right eye for the last three months. Clinically, she has basal cell carcinoma of the lower lid. The growth pattern of basal cell carcinoma with worse prognosis is
a. Adenoid b. Cystic
c. Adenocystic d. Nodular
e. Fibrosis

1.B	2.A	3.B	4.E

2.Chalazion

1. A young lady with blepharitis presents with a swelling on the right upper lid for the last one month; the commonest painless lid swelling is:
a. Chalazion b. Cyst of moll
c. Cyst of zeis d. Internal hordeolum
e. Stye

2. A 25 years old male comes to the clinic with a 3 months history of painless swelling on his right upper lid. On examination there is posterior blepharitis and a smooth rounded nodule slightly away from the lid margins. What is your most probable diagnosis?
a. Chalazion b. Dermoid
c. Haemangioma d. Papilloma e. Sebaccous cyst

3. The commonest painless lid swelling is
a. Chalazion b. Cyst of moll
c. Cyst of zeis d. Externalhordiolum
e. Internalhordeolum

4. The commonest painless lid swelling is
a. Chalazion b. Cyst of moll
c. Cyst of zeis d. External hordiolum
e. Internal hordeolum

1.A	2.A	3.A	4.A

5. A recurrent chalazion should be subjected to histopathologic evaluation to exclude the possibility of:

a. Squamous cell carcinoma
b. Sebaceous cell carcinoma
c. Malignant melanoma
d. Basal cell carcinoma
e. Meibomian adenoma

KEY: B

3. Infections:

1. A 13 years old is brought to an ophthalmologist with pain and diffuse swelling of right upper lid. On examination the boy is febrile and the upper lid area is red, swollen and tender. What is the most likely diagnosis?

a. Amyloidosis of the lids b. Preseptal Cellulitis
c. Posterior Blepharitis d. Seborrheic Blepharitis e. Ulcerative Blepharitis

2. A young lady Of 20 presents with chronic irritation, burning, grittiness and photophobia in both eyes. On slit lamp examination the eye lashes are matted together with yellow crusts. One of these crusts was removed with forceps and the area started bleeding. What is the most likely diagnosis?

a. Amyloidosis of the lids b. Preseptal Cellulitis
c. Posterior Blepharitis d. Seborrheic Blepharitis
e. Ulcerative Blepharitis

3. A 40 year-old diabetic lady consults you with a painful localized swelling on her lower lid for the last two days. What is your diagnosis?

a. Chalazion b. Ectropion
c. Entropion d. Hordeolum
e. Sebaceous cell carcinoma

1.B	2.E	3.D

4. Eyelid Margin:

1. Distichiasis is:

a. Absent eyelashes
b. Accessory row of lashes
c. Long eyelashes
d. Misdirected eye lashes
e .Thick eyelashes

2. A 70 year-old patient with previous history of Bell's palsy presents with epiphora. What is the most appropriate diagnosis?

a. Ectropion b. Entropion c. Keratitis
d. Dacrocystitis e. Conjunctivitis

3. The most common complication of botulinum toxin injections for essential blepharospasm is

a. Vertical strabismus b. Adie's pupil
c. Ptosis d. Perforsation of globe
e. Retrobulbar haemorrhage

1.B	2.A	3.C

5. Lacrimal Apparatus:

1. In Dacryocystorhinostomy (DCR) operation, the window is made in the lateral nasal wall is, at the level of:

a. Ethmidal sinus b. Middle meatus
c. Superior meatus d. Inferior meatus
e. Lacrimal fossa

2. Dacryocystorhinostomy is done for:

a. Cataract b. Ectropion
c. Chronic dacryocystitis d. Acute dactyosenitis
e. Acute orbital cellulitis

3. Nasolacrimal duct opens in:

a. Inferior meatus b. Inferior turbinate
c. Middle meatus d. Middle turbinate
e. Superior meatus

4. A patient of 45 years old presented with facial palsy. The epiphora in this patient was dua to:

a. Ectropion b. Entropion
c. Hyper secretion of tears d. Lacrimal pump failure
e. Lagophthalmos

5. In dacryocystorhinostomy operation, nasal mucosa flap is stitched to

a. Lacrimal sac flap b. Lacrimal fascia
c. Orbicularis muscle d. Periosteum
e. None of the above

6. A mother brings her 4 months old child complaining of watering since birth. The rest of ocular examination is normal. What is your diagnosis?

a. Acute conjunctivitis b. Acute iritis
c. Congenital obstruction of nasolacrimal duct
d. Retrobulbar neuritis e. Scleritis

7. A 70 years -old man, farmer by occupation, presents to you in the OPD with a small shiny nodule, firm in consistency with dilated blood vessels on the surface of the lower eyelid. The lymph nodes are normal. The lesion is not painful but is increasing in size and beginning to bleed sometimes. Which of the following conditions come to your mind?

a. Actinic keratosis
b. Basal cell carcinoma
c. Melanoma
d. Sebaceous gland carcinoma
e. Squamous cell carcinoma

1.E	2.C	3.A	4.D
5.A	6.C	7.	---

HINTS AND EXPLANATION

TUMORS

1. Slow growing nodules with ulcerated centre, roled edges and no lymphadenopathy points towards basal cell carcinoma
2. Basal cell carcinoma have fine dilated blood vessels which bleed sometimes.
3. Basal cell carcinoma with worse prognosis is sclerosing morphea form fibrosis type.

CHALAZION

1. Painless lid swelling is most probably chalazion
5. Histopathologic evolution of recurrent chalazion is always done to exclude sebaceous cell carcinoma as chalazion arises due to obstruction of mlebomian gland which secrete lipid secretions

INFECTIONS

1. When there is diffuse tender painful upper eyelid swelling with fever this shows preseptal cellulitis
2. When eyelashes are matted with yellow crust and when these crusts are removed they leave a bleeding ulcer the most likely diagnosis is ulcerative blepharitis.
3. Painful but localized solitary lid swelling is hordeolum.

EYELID MARGIN

1. Accessory row of lashes is distichiasis
2. Facial nerve palsy (Bell's palsy) cause ectropion.
3. Botulinum muscle causes levator ani muscle paralysis so cause ptosis.

LACRIMAL APPARATUS

1. In DCR window is made in lacrimal fossa.
2. DCR is done in chronic dacrocystitis.
3. Nasolacrimal duct open in inferior meatus.
4. Lacrimal secretions are actively pumped by orbicularis muscle which act as lacrimal pump so patient with facial palsy and epiphora have lacrimal pump failure
(Paralysis of orbicular muscle.
5. In DCR nasal mucosa flap is attached to lacrimal sac flap to provide direct drainage of lacrimal secretions into nasal mucosa.
6. Child four month old presented with watering since birth have congenital obstruction of nasolacrimal duct

EYE-02

CONJUCTIVE/CORNEA

BACTERIAL CONJUCTIVITS

1. A 45 year old farmer is cutting wheat when he feels something went into his Right Eye. 2 days afterwards his Right eye becomes painful and photophobic and he is referred to a tertiary care hospital. His visual acuity in the Right eye is 6/24 improving to 6/12 with pin hole. The Right pupil is constricted but there is NO RAPD. The eye is injected with signs of Keratitis with a few cells in anterior chamber. One of the following is the first mandatory procedure in the management of this patient?

a. Anterior Chamber Paracentesis
b. Corneal Scrape for Microscopy and Gram Staining
c. Vitreous tap
d. Topical antibiotics
e. Topical steroids

2. A 7 years old child presents in every spring season for the last 4 years itching, redness, watering. There is no purulent discharge. He has got a history of eczema. On examination there are no follicles but papillae both upper tarsal conjunctivae. There are no preauricular lymph nodes. What is the diagnosis?

a. Adenoviral conjunctivitis
b. Bacterial conjunctivitis
c. Chemical conjunctivitis
d. Trachoma
e. Vernal conjunctivitis

3. A lady develops bacterial keratitis in the left eye. She is started on topical antibiotics the cornea continues to slough but ultimately the keratitis heals with extreme corneal thinning, descemetocele. This descemetocele leads to corneal perforation in 2 weeks. All of the following except one are appropriate treatments in cases of corneal perforation:

a. Amniotic membrane graft
b. Bandage Contact Lens
d. Cyanoacrylate adhesive
e. Descemet Stripping Automated Endothelial Keratoplasty

4. A female of 40 years presents with painless decrease of vision for four years. The patient has myopia with irregular astigmatism. There is thinning of the central cornea. The most sensitive investigation for this patient is:

a. Refractions
b. Keratometary
c. Corneal topography
d. Ocular biometry
e. Anterior segment OCT

5. The best suture material for repair of corneal injuries is

a. 10/0Nylon
b. 6/0 Vieryl
c. 5/0 Ethiband
d. 6/0 Prolene
e. 8/0 Virgin silk

6. A 30 year old male from Swabi has returned from a business/pleasure trip to Thailand and developed sore red Right eye. He went to the local Ophthalmologist who prescribed Chloramphenical Eye Drops but his condition did not improve. On examination his Visual acuities are 6/9 both eyes. On Slit Lamp examination he has minimal discharge with bilateral conjunctival follicles and epithelial infiltrates in both corneas. Rest of the examination of the eyes is normal. He has enlarged Pre auricular lymph nodes and has been complaining of urethral discharge. The likely diagnosis is:

a. Allergic conjunctivitis
b. Bacterial Conjunctivitis
c. Chlamydial conjunctivitis
d. Vernal Conjunctivitis
e. Rosacea Conjunctivitis

7. A 30 year old male from swabi has returned from a business/pleasure trip to Thailand and developed sore red Right eye. He went to the local

Ophthalmologist who prescribed Chloramphenical Eye Drops but his condition did not improve. On examination his visual acuities are 6/9 both eyes. On Slit Lamp examination he has minimal discharge with bilateral conjunctival follicles and epithelial infiltrates in both corneas. Rest of the examination of the eye is normal. He has enlarged pre auricular lymph nodes and has been complaining of urethral discharge. The likely diagnosis is:

a. Allergic conjunctivitis b. Bacterial Conjunctivitis
c. Chlamydial Conjunctivitis d. Vernal Conjunctivitis e .Rosacea conjunctivitis

8. A 30 years old male presents to OPD with watering and redness of both eyes. His visual acuity is 6/6 on both eyes. On eversion of upper eyelids you see diffuse inflammation and more than five follicles on upper tarsus. What is the most likely diagnosis?

a. Blinding trachoma
b. Bacterial ulcers
c. Egyptian conjunctivitis
d. Herpes infection of the eye
e. Both a and c

9. A young adult presents with red eyes for the last 3 days. Clinically, he has purulent conjunctivitis. The most common cause of hyperacute purulent conjunctivitis is

a. Hemophilus influenza
b. Hemophilus aegyptius
c. Streptococcus pneumoniae
d. Neisseria gonorheae
e. Neisseria meningitides

10. Which conjunctivitis is least likely to occur bilaterally?

a. Allergic b. Viral
c. Bacterial d. Vernal e. Fungal

11. A patient presents with a painful, sticky red eye with a congested conjunctiva. What is the most suitable treatment?

a. Antibiotic PO b. Antihistamine PO
c. Antibiotic drops d. Steroid drops
e. None of the above

1.B	2.E	3.E	4.C	5.A	6.C
7.C	8.E	9.D	10.C	11.C	---

2. VIRAL

1. Sub conjunctival hemorrhage is a typical feature of:

a. Adenoviral conjunctivitis b. Corneal ulcer
c. Fungal Keratitis d. Ophthalmia neonatorum
e. Subarachnoid hemorrhage

3. NEONATAL

1. An infant presented with sticky discharge both eyes and extreme congestion of conjunctiva. Provisional diagnosis is the ophthalmia neonatorum which is caused by:

a. Diphtheria b. E. Coli
c. Gonococcus d. Staph.aureous
e. Streptococcus

4. ALLERGIC

1. Follicles are commonly seen in conjunctivitis due to:

a. Alkali burns b. Chalamydial infection
c. Gonococcal conjunctivitis d. Seasonal allergy
e. Pseudomonas conjunctivitis

2. A 14years old boy from chitral was diagnosed with vernal keratoconjunctivitis both eyes, and was prescribed topical medications which relieved his symptoms to a large extent. He has come to Peshawar for second opinion as he is losing sight in both eyes for the last one year. His visual acuities are 6/60 both eyes, pupillary responses are sluggish to both direct and consensual light. He has got giant papillae in both eyes. He has instraocular pressures of 50 mm Hg in each eye. On direct ophthalmoscopy he has got bilateral advanced cupping of topic disc. There is no family history of glaucoma. He forgot to bring his medication from chitral. A diagnosis of secondary glaucoma as a side effect to the topical drugs he was using is made. The anti allergic drug most likely to cause secondary glaucoma is?

a. Betamethasone eye drops
b. Emedastine eye drops
c. Lodoxamide eye drops
d. Otopatadine eye drops
e .Sodium Cromoglycate eye drops

3. A 15 year old boy presents with progressive decrease in vision. He suffers from Vernal Kerato Cunjunctivitis. He was started using some eye drops which have dramatically reduced itching and photophobia some 2 years ago. He is found to have Bilateral Posterior Sub Capsular Cataracts with Visual acuities of 6/12 both eyes. The most likely topical anti allergic drug to cause cataract is:
a. Cromoglycate b. Dexamethasone c. Emedastine
d. Ketrolac e. Lodoxamide

4. A 7 years old child presents in every spring season for the last 4 years itching, redness, watering. There is no purulent discharge. He has got a history of eczema. On examination there are no follicles but papillae both upper tarsal conjunctivae. There are no preauricular lymph nodes. What is the diagnosis?
a. Adenoviral conjunctivitis
b. Bacterial conjunctivitis
c. Chemical conjunctivitis
d. Trachoma e. Vernal conjunctivitis

5. Follicles are commonly seen in conjunctivitis due to:
a. Alkali burns b. Seasonal allergy
c. Chalamydial infection
d. Pseudomonous conjunctivitis
e. Gonococcal conjunctivitis

6. A 15 year old boy presents with progressive decrease in vision. He suffers from Vernal Kerato Conjunctivitis. He started using some eye drops which have dramatically reduced itching and photophobia some 2 years ago. He is found to have Bilateral Posterior Sub Capsular Cataracts with Visual acuities of 6/12 both eyes. The most likely topical anti allergic drug to cause cataract is:
a. Cromoglycate b. Dexamethasone
c. Emedastine d. Ketrolac e. Lodoxamide

7. A 7 year old boy is brought by his parents in early April with itching, photophobia and red eyes. His Visual Acuities are 6/12 both eyes. There is no pupillary deficit. On examination he has bilateral conjunctival injection with stringy discharge, upper lid and limbal papillae. There is punctate staining of the cornea and anterior chamber is quiet. He had a similar exacerbations every spring for last 3 years. The likely diagnosis is:
a. Adenoviral Conjunctivitis
b. Bacterial Conjunctivitis
c. Chlamydial Conjunctivitis
d. Vernal Keratoconjunctivitis
e.Viral Keratoconjunctivitis

1.B	2.A	3.B	4.E
5.C	6.B	7.D	--

5. SUBCONJUCTIVAL HEMORRHAGE

1. A three years old child is presented with bilateral subconjuctival haemorrghes. He has been suffering from fever, severe cough and chest infection for the last few days. The commonest cause of subconjunctival haemorrghe in this cause can be:
a. Fever b. side effect of antibiotics
c. Cough d. Chest infection
e. Trauma ton the eye

2. Which of the following ocular involvements occurs in sickle cell anemia?
a. Retinal hemorrhage b. Conjunctival hemorrhage
c. Iritis d. Scleritis e. Uveitis

3. A 40 year old farmer gives a history of trauma and complains of redness and difficulty seeing in bright light. What is the most likely diagnosis?
a. Closed angle glaucoma b. Acute iritis
c. Conjunctivitis d. Subconjunctival hemorrhage
e. Episcleritis

1.C	2.A	3.D

7. PTERYGIUM

1. A farmer presented with a fleshy triangular conjunctival mass encroaching upon the nasal side of the cornea for 3mm. The most appropriate treatment will be:
a. Artificial Tears/decongestant
b. Complete excision with conjunctival auto-graft
c. Excision biopsy
d. Excision with Mitomycin- C application
e. Topical Antibiotic/steroids combination

8. PUPIL

1. A House officer was asked about the causes of a dilated pupil. The most common cause of a dilated pupil is:

a. Trauma
b. Third Cranial Nerve Palsy
c. Pharmacological Dilation
d. Acute Angle Closure Glaucoma e. Tonic Pupil

2. A fixed dilated pupil which does not react to direct or consensual light stimulus could be caused by:

a. Option Nerve Avulsion
b. Option Neuritis
c. Optic Tract Lesion
d. Topical Application of atropine
e. Papialloedoma

3. All of the following are causes of leucocoria except:

a. Buphthalamus
b. Coats Disease
c. Congenital Cataract
d. Persistent hyper-plastic primary vitreous
e. Retinopathy of prematurity

4. A 40 Years old lady from Darra Adam khel presents with intense pain, photophobia and decreased vision in both eyes. Her visual Acuities are 6/24 both eyes and she has keratic Precipitates, cells in the anterior chamber and posterior synechiae. Intraocular pressures are 10 and 12 Right and Left eyes respectively. She also complains of lower back ache. All of the below are appropriate treatments except:

a. Analgesics
b. Sun Tenon Steroids
c. Topical Moxifloxacin
d. Topical Cycloplegics
e. Topical Steroids

5. A 37 year old laborer comes with history of redness of left eye with foreign body sensation in the same eye. What is the single most appropriate option?

a. Ciliary Body b. Sclera
c. Conjunctivitis d. Cornea e. Iris

1.C	2.D	3.A	4.C	5.D

9. KERATOPLASTY

1. In lamellar keratoplasty:

a. Full Thickness corneal graft is used
b. A combination of corneal and conjutival graft is used
c. Partial thickness corneal graft is used
d. Donor Cornea is stitched on top of recipient cornea
e. Hard contact lens is applied after removing corneal epithelium of the recipient

2. A lady develops bacterial Keratitis in the left eye. She is started on topical antibiotics the cornea continues to slough but ultimately the keratitis heals with extreme corneal thinning, descemetocele. This descemetocele leads to corneal perforation in 2 weeks. All of the following except one are appropriate treatments in cases of corneal perforation:

a. Amniotic membrane graft
b. Bandage contact Lens
c. Conjutival flap
d. Cyanoacrylate adhesive
e. Descemet Stripping automated Endothelial Keratoplasty

3. The best suture material for repair of corneal injuries is:

a. 10/0 Nylon b. 6/0 Vicryl
c. 5/0 Ethiband d. 6/0 Problem
e. 8/0 Virgin Silk

1.C	2.E	3.A

10. KERITIS

1. The commonest complications of excessive use of steroids in the eye is:

a. Keratoglobus
b. Herpes Simplex Keratitis
c. Trachoma d. Hypaema e. Exophthalmos

2. In non healing sloughing corneal ulcer, where the perforation of cornea is apprehended,the best option is:

a. Scraping of the corneal ulcer
b. Subconjunctival antibiotics
c. Evisceration d. Conjunctival flap

e. Carbonization of the ulcer bed

3. Dendritic ulcer is caused by:

a. Bacteria b. Fungus c. Radiation
d. Trauma e. Virus

4. A 45 Years old farmer is cutting wheat when he feels something went into his right Eye. 2 Days afterwards his right eye becomes painful and photophobic and he is referred to a tertiary care hospital.His visual acuity in the right eye is 6/24 improving to 6/12 with pin hole. The right pupil is constricted but there is No RAPD. The eye is injected with signs of Keratitis with a few cells in anterior chamber. One of the following is the first mandatory procedure in the management of this patient?

a. Anterior Chamber Paracentesis
b. Corneal Scrape for Microscopy and Gram Staining
c. Vitreous Tap
d. Topical Antibiotics e. Topical Steroids

5. A 24 Years old man presents with watering, photophobia and dimness of vision in his right eye. On examination his visual acuity in the affected eye is 6/18 and normal in the other eye. On fluorescein staining cornea shows a lesion with branching pattern. His corneal sensitivity is decreased. What is most likely diagnosis?

a. Adenoviral keratoconjunctivitis
b. Autoimmune keratitis
c. Bacterial Keratitis
d. Fungal Keratitis
e. Herpes Simplex Keratitis (HSK)

6. A man of 30 years presents with pain in the left eye for one week. Clinically there is ciliary congestion, corneal lesion in the form of a branch and decreased corneal sensation. What is the most likely diagnosis?

a. Amoebic Keratitis
b. Dendritic Keratitis
c. Disciform Keratitis
d. Nummular Keratitis
e. Filamentary Keratitis

7. The diagnosis finding of fungal Keratitis is:

a. Satellite Lesions b. Hypopyon
c. Epithelial Defect d. Radial Keratitis
e. Subepithelial Infiltration

8. A man presents with pain, redness, decreased vision in the right eye. He was diagnosed as a case of Corneal Ulcer with Hypopion, which medication should not be used?

a. Analgesics b. Antibiotics
c. Antifungal d. Cyclo-pegics
e. Steroids

9. A Young boy presented in emergency with watering and photophobia in right eye after a trauma, which test is most appropriate?

a. Applanation tonometry
b. Fluorescent Staining
c. Rose Bengal Staining
d. Schirmer's Test
e. Tear Break Up Time

10. A patient presented with photophobia and watering in left eye. On examination with fluorescein staining revealed dendritic ulcer which is caused by:

a. Fungus b. Herpes Zoster Virus
c. Herpes Simplex Virus d. Mycobacterium
e. Staphylococci

11. The topical steroid with the greatest anti-inflammatory activity within the cornea is:

a. Prednisolone phosphate
b. Dexamethasone phosphate ointment
c. Prednisolone acetate
d. Dexamethasone Alcohol suspension
e. Flurometholone alcohol Suspension

12. Which of the following statement is true regarding acanthameoba Keratitis?

a. For the Isolation of the causative agent, corneal scraping should be cultured in a nutrient agar plate
b. The causative agent, Acanthameoba is a helminth whose normal habitat is soil.

c. Keratitis he to acanthameoba is not seen in the immunocompromised host.
d. Acanthameoba depends upon a human hostel for the completion of its life cycle
e. Acanthameoba depends upon a human hostel for the completion of its life cycle

13. Enlarged corneal nerves may be seen in All of the following except:
a. Keratoconus b. Herpes Simplex Keratitis
c. Leprosy d. Neurofibromatosis
e. Multiple Endocrine Neoplasia (MEN) type 2a and 2b

14. A 13 year old boy has trauma to his left eye with a sharp object. On Ocular examination his visual acuity in his left eye is just perception of light and his iris seems to be prolapsed through the wound. All is the following are the treatment options except:
a. Topic antibiotic drops b. Antibiotic ointment
c. Corneal repair d. Iris reposition
e. Excision depending upon availability of Iris

1.B	2.D	3.E	4.B	5.A
6.B	7.A	8.E	9.B	10.C
11.C	12.E	13.B	14.B	--

11. KEROTOCONUS

1. A 15 years old girl presents with painless and gradual dimness of vision in both eyes since last 4 years. She has a history of vernal kerotoconjuctivitis since the age of 5 and frequent change in glasses for four years. On examination her visual acuity is counting finger in both eyes and cornea looks clear but bulging and conical. The most probable diagnosis is?
a. Bilateral Corneal opacities
b. Congenital Glaucoma
c. Corneal Dystrophies
d. Keratoconus e. Keratoglobus

2. A female of 40 years presents with painless decrease of vision for four years. The patient has myopia with irregular astigmatism. There is thinning of the central cornea. The most sensitive investigation for this patient is:
a. Refractions b. Keratometry
c. Corneal Topography d. Ocular Biometry
e. Anterior Segment OCT

3. Keratoconus has got association with the following conjunctival condition:
a. Membrane conjunctivitis
b. Follicular Conjunctivitis
c. Subendothelial Haemorrhage
d. Vernal Kerato Conjunctivitis
e. Chemical Burns

1.D	2.C	3.D

12. MIX MCQ

1. The Oculur sign of the Wilson's Disease is:
a. Droplet cataract b. Fleischer's Line
c. Haab's Striae d. Kayser Fleischer's Ring
e. Stocker Line

2. Complications of contact lenses include all of the following except:
a. Allergy b. Corneal Infiltrates
c. Corneal Pigmentation d. Corneal Ulcer
e. Giant papillary Conjunctivitis

3. Contact lenses wear is proven to have deleterio effects on the corneal physiology. Which of the following statements is incorrect in connection w contact lens wear?
a. There is a reduction in hemidesmosome density
b. The level of glucose availability in the corneal epithelium is reduced.
c. There is increased production of CO2 in the epithelium
d. There is reduction in the glucose utilization by Corneal Epithelium
e. There is decreased gas exchange across the anterior surface of cornea

4. The most common location of origin for conjunctival or corneal intraepithelial neoplasia is:
a. The inferior fornix b. The superior fornix
c. The bulbar conjunctivitis
d. The palbebral conjunctiva e. the limbus

1.D	2.C	3.E	4.E

EYE-03

UVEA/RETINA/NEUROPTHALMOLOGY

1.UVEA

ANTERIOR-UVEITIS

1. Acute interior uveitis in young individuals is commonly associated with;

a. Toxoplasmosis
b. Ankylosing spondylitis
c. Allergic conjunctivitis
d. Sarcoidosis
e. Marfan's syndrome

2. A 30 year male presented with sudden dimness of vision in his right eye for 4 days . He gives history of backache for which he is talking NSAIDS . On examination visual acuities in affected eye is 6/8 . On slit lamp examination there is circumcronial congestion and KPs, flare and +3 cells in anterior chamber. Right pupils shows a posterior synechiae at 10 o' clock . Most probable diagnosis is :

a. Acute anterior uberitis
b. Adenoviral conjunctivitis
c. Angular closure glaucoma
d. Trachoma
e. Vernal catarrh

3. A 32 year male presents with a red eye. He was referred to the ophthalmologist with a suspected diagnosis of uteritis.the most reliable sign for dalgnosising acute acute uvertis is;

a. Moderate to severe pain
b. Mild to moderate deterioration of vision
c. KPs on endothelium
d. Cells in anterior chamber
e. Flare in anterior chamberd

4. A 40 year female presents with blurred vision of right eye for the last 10 days . clinically she has ciliary congestion small keratic precipitates on the endothelium with numerous cells in the anterior chamber .the most likely diagnosis is:

a. HLA-B27 related anterior uvertis
b. Idiopathic anterior uvertis
c. Fuchs heyerocramic iridocyclitis
d. Herpes simplex anterior uvertis
e. Tuberculosis iridocyclitis

5. Pupil in acute anterior uveritis is;

a. Dilated and irregular with good reaction
b. Dilated and regular with poor reaction
c. Mid dilated and oval with poor reaction
d. Mlosed and irregular with poor reaction
e. Mlosed and regular with poor reaction

6. A 30 year male presented with sudden dimness of vision in his right eye for 4 days. He gives history of backache for which he is taking NSAIDS. On examination visual acuity in the effected eye is 6/18. On slit lamp examination, there is circumcronial congestion ,keratic precepitates with flare +3 cells in anterior chamber. Right pupil shows a posterior synechiate at 10'o clock. The most probable diagnosis is ;

a. Acute anterior uveitis
b. Adenoviral conjunctivitis

c. Angle closer glaucoma d. Trachoma
e. Vernal catarrh

7. Pupil in acute anterior uveritis is;
a. Dilated and irregular with good reaction
b. Dilated and regular with poor reaction
c. Mid dilated and oval with poor reaction
d. Miosed and irregular with poor reaction
e. Miosed and regular with poor reaction

8. A patient presented with gross disease of vision . On torch examination there was peri lambal congestion of conjunctiva and pupillary miosis. Which is the probable diagnosis:
a. Acute congestive glaucoma b. Anterior uvertis
c. Conjunctivitis d. Keratitis
e. Scleritis

9. What would be the most likely daignoses in a patient with uvertis that shows bilateral and symmetric hilat adrenopathy on chest X rays and has raise scrum angiotensin covering enzyme level:
a. Behcer's disease b. Sarcoidosis
c. Syphilis d. Toxoplasmosis
e. Tuberculosis

10. Which of the following ocular involments occur in reiter's syndrome
a. Iritis b. Keratoconjunctivitis sicca
c. Pizza pie fundus d.scleritis
e. Uveitis

11. Clinical feature of acute uvertis is
a. No pain b. Floaters
c. Diffuse redness of conjunctiva d. Keratic precepitates
e. No photophobia

1.B	2.A	3.D	4.C	5.D	6.A
7.D	8.B	9.B	10.E	11.D	--

COMPLICATIONS

1. The common complication of severe posterior uberitis can be:
a. Vitreous loss
b. Rhegmatogenous retinal detachment
c. Exudative retinal detachment
d. Dislocation of lens
e. Pupillary block glaucoma

2. A 10 year old girl presented with bilateral posterior uveitis for the last 2 months. The most common cause of posterior uveitis in the pediatric population is;
a. Toxocariasis b. Toxoplasmosis
c. Syphilis d. Sarcoidosis e. Idiopathic

1.C	2.B

2. RETINA

1. Synoptophore is used for all the following except:
a. Color blindness b. Depth perception
c. Abnormal retinal correspondence
d. Erotropia e. Exotropia

2. According to the latest population based servey conducted in Pakistan ,what is the blindness rate in Pakistan:
a. 0.50% b. 0.90%
c. 1.5% d. 1.78% e. 2.0%

3. The most common cause of blindness in working age population (16-64) is:
a. Cataract b. Conjunctivitis
c. Corneal degeneration d. Glaucoma
e. Retinal disease

4. A 38 year old female presents with sudden loss of vision but fundoscopy is normal. She has similar episode about 1 year ago which resolved completely with in 3 months. Exam mild weakness of right upper lamb and exaggerated refelexs . What is the single most appropriate treatment?
a. Pan retinal photo coagulation
b. Pilocarpine eye drops
c. Corticosteroids
d. Peripheral iridectomy
e. Surgical extension of lens

1.A	2.B	3.E	4.C

5. A 55 year old man presents with mild headache. He has changed his spectacles thrice in one year. There is mild cupping present in the disc and sickle shaped sactoma presents in both eyes what is single most appropriate treatment?

a. Pan retinal photo coagulation
b. Pilocarpine eye drops
c. Corticosteroids
d. Sceral buckling
e. Analgesics alone

5.B

DIABETIC RETINOPATHY

1. At the pre-proliferative stage of the diabetic retinopathy , the best option for preventing the progress of disease is ;

a. YAG laset capsulotomy
b. Good metabolic control of diabetes
c. Pan retinal photocoagulation
d. Subconjunctival injection of steroids
e. Vitrectomy and injection of silicone oil

2. A 35 year old gentle man with type 1 Diabetes for the last 20 years notices a sudden decreases in vision in the left eye for the 2 days. His visual acuities are 6/12 right and 6/60 left eye. The visual acuity improves to 6/6 in the right but does not improve in the left eye with pinhole.he has a left relative afferent pupillary defect. On distinct direct opacity there is no media opacity .on Direct ophthalmoscopy there is a boat shaped" haemorrhage with sharp demarcation obscuring the mascula and blood vessels.the diagnosis is;

a. Vitreous heomorrhage
b. Sub retinal heomorrhage
c. Sub mascular heomorrhage
d. Sub hyaloid heomorrhage
e. Deep retinal heomorrhage

3. A eticforthel56 year old Non _ insulin dependent diabast 15 years HbA1c of 10.4% and blood pressure of 190/100 mmHg suddenly develop right ptosis . The right eye is addicted . On ocular movement examination there is a failure of of addiction and elevation of right eye. There is no pupillary abnormalities and the rest of examination of cranial nerve is normal with no other neurological defects. The most likely diagnosis is;

a. Ponting infract
b. Isolated 3rd nerve palsy
c. Isolated 4th nerve palsy
d. Isolated 5th nerve palsy
e. Isolated 6th nerve palsy

4. A 44 year male presents with dimness of vision for the last sex months .his visual acuity was 6/18 in both eyes .His fasting blood sugar was 290 mmHg . The most common mechanism for a diabetic patient to lose vision is :

a. Cataract
b. Macular oedema
c. Vitreus hemorrhage
d. Retinal detachment
e. Opaque membranes in vitreous

5. When should a case of non insulin dependent diabetes millitus (NIDDM)with a history of daibetes for one year have an ophthalmiic examination?

a. As early as feasible
b. After 1 year
c. After 5 years
d. After 10 years
e. Only after visual symptoms develop

6. The most common cause of visual impairment in daibetic retinopathy is:

a. Advance diabetic eye disease
b. Background daibetic retinopathy
c. Daibetic macular aedema
d. Severe non proliferative daibetic retinopathy
e. Proliferative diabetic retinopathy

7. A 35 year old gentle man with type 1 Diabetes for the last 20 years notices a sudden painless decrease in the vision in the left eye for the 2 days. His visual acuities are 6/12 right and 6/60 left eye.the visual acuity improves to 6/6 in the right while not improve in the left eye with the pinhole.He has a left relative afferent pupillary defect.On distant direct opacity there is no media capacity.On direct opthalmoscopy there is an elevated "boat shaped" stationary Haemorrhage approximately 4 disc diameters wide with sharp demarcated boundaries obscuring the macula and retinol blood vessels.the diagnosis is,

a. Viterous Haemorrhage
b. Sub retinol haemorrhage
c. Sub macular Haemorrhage
d. Pre retinol haemorrhage
e. Deep retinol haemorrhage

8. In diabetic retinopathy the new vessel formation is due to following pathology

a. Retinal breaks
b. Retinal eadema
c. Retinal hemorrhage
d. Retinal ischemia
e. Vitreous hemorrhage

9. pathogenomic clinical sign of proliferative diabetic retinopathy is

a. Deep retinal hemorrhage
b. Flam shaped hemorrhages
c. Hard exudates
d. Micro ancurysms
e. Neovascularization of retina

10. The following clinical features in a diabetic patient needs early referral to ophthalmologist

a. Background diabetic retinopathy with large exudates involving mucula
b. Normal fundus
c. Early lenticular opacities
d. Mild background diabetic retinopathy
e. Refractive error

11. A patient with type 1 daibetic millitus has a fundus showing micro-ancurysm and hard exudates . What is the most single likely diagnoses;

a. Macular degeneration
b. Hypertensive retinopathy
c. Multiple sclerosis
d. Daibetic background
e. Proliferative DM retinopathy

12. Roth's spots may be absorbed in all of the following except?

a. Leukemia
b. Daibetes
c. Multiple sclerosis
d. Hypertensive retinopathy
e. Subacute bacterial endocarditis

13. A 64 year old diabetic patient has come for a routine eye check up fundoscopy new vessels all over the retina. What is the most appropriate management.

a. Strict Sugar control
b. Regular eye check ups
c. Non urgent referral to specialist
d. Laser photocoagulation
e. Insulin

1.B	2.D	3.B	4.B	5.A
6.C	7.D	8.D	9.E	10.A
11.D	12.C	13.D	--	--

HYPERTENSIVE RETINOPATHY

1. Relative afferent pupillary defect is seen all of the following except;

a. Optic neurititis
b. Optic atrophy
c. Glaucomatous Optic neuropathy
d. Retinal detachment
e. Hypertensive retinopathy

2. A patient on long term treatment with nifedipine shows flamed shaped hemorrhages. What is the single most likely diagnosis?

a. Macular degeneration
b. Hypertensive retinopathy
c. DM background
d. Proliferative DM retinopathy
e. SLE

1.E	2.B

CRAO- CENTRAL RETINAL ARTERY OCCLUSION

1. A 50 years old hypertensive patients is brought to the OPD with sudden deterioration of vision in his right eye ,on examination ,his visual acuity is hand movements , he is having relative afferent pupillary defect ,(RAPD) in the affected eye . On fundoscopy ,his retina is white and swollen and he is having cherry red spot at macula. What is your provisional diagnosis?

a. Malignant hypertension
b. Ischaemic retinal vein
c. Exudative retinal detachment
d. Central retinal artery occlusion

KEY: D

2. A 50 year old man presents with painful sudden decrease of vision in the right eye. His visual acuities are HM and 6/6 the visual acuities doenot improve with pinhole. There is a right relative afferent pupillary defect. Anterior segments and intra ocular pressure are normal.There are no media opacities and the right fundus shows a cherry rewd spots. All except one are relative initial investigations in this case:

a. Blood pressure checking
b. Carotid Auscultation
c. Carotid Doppler
d. Echocardioghrapy
e. Vertebral artery angiography

3. Central retinal Artery occlusion is characterized by:

a. Afferent pupillary defect
b. Disc edema
c. Flame shaped hemorrhages
d. Venous tortuosity
e. Vitreous hemorrhage

4. A 70 years male comes to the eye department with a visual loss in his right eye . On examination his vision was reduced to no light perception with afferent papillary defect.Fundas shows defuse retinal eadema and cherry red spot at macula .What is the most probable diagnosis?

a. Anterior ischaemic optic neuropathy
b. Central retinal vein occlusion
c. Central retinal artery occlusion
d. Nutritional optic neuropathy
e. Optic neuritis

5. cherry red spots in the macular area of the retina is seen in;

a. Age related macular degeneration
b. Central chorio retinits
c. Central retinal artery occlusion
d. Central retinal vein occlusion
e. Central serous retinopathy

6. A 70 year old hypertensive gentleman develops sudden profound loss of vision in the right eye associated with severe pain over the right temple . His visual acuities are perception of light and 6/9 right and left eye respectively. The visual acuity does not improve with pin hole in the right eye but improves to 6/6 in the left . He has right relative afferent pupillary defect. No abnormality is detachable on anterior segment examination and distinct direct ophthalmoscopy . On direct ophthalmoscopy the right retina is pale swollen and has attenuated retinal vessels devoid of blood . There is also a cherry red spots on the macula. On examination of the scalp the frontal branch of superficial temporal artery is excruciatingly tender. His ESR was noted to be 80mm in the first hour. The most likely diagnosis is;

a. Non arteritic anterior ischaemic optic neuropathy
b. Central retinal artery occlusion
c. Central retinal vein occlusion
d. Macular degeneration
e. Vitreous hemorrhage secondary to posterior vitreous detachment

7. In central retinal occlusion ,on fundoscopy you see,

a. Extensive retinal hemorrhage
b. Cattle trucking
c. Normal retina
d. Macular star
e. No cherry red spots on macula

2.E	3.A	4.C	5.C	6.B	7.B

CRVO

1. Which of the following is the main cause of neovascular glaucoma?

a. Central retinal artery occlusion
b. Branch retinal artery occlusion
c. Hypertension
d. Central retinal vein occlusion
e. Branch retinal vein occlusion

2. A 65 year old hypertensive man presents with sudden decrease in vision in the left eye For last 1 week. The right eye lost vision 3 years ago.The visual acuities are CF right and left eyes with no improvement in either eye with pin hole. The right eye has optic atrophy and with disc collaterals and mascular scarring . The left eye showed multiple, flame shaped and deep retinal haemorrhages with cotton wool spots covering almost the entire retina.

The optic disc is swollen and he has mascular aodema .the most likely diagnosis is:

a. Central retinal artery occlusion
b. Central retinal vein occlusion
c. Choroidal neovascular memberane involving the forvea.
d. Rapilloedema
e. Anterior ischaemic optic neuropathy

3. Neovascular glaucoma is common in;

a. Ischaemic central retinal vein occlusion
b. Vitreous Haemorrhage
c. Hypermature cataract
d. Subluxed lens
e. Hyphaema

4. A 65 year old hypertensive man presents with painless sudden decrease in vision in the left eye for last 1 week . The right eye lost vision 3 years ago. The visual acuities are CF right and left eyes with no improvement in either eye with pin hole. The right eye has optic atrophy and with disc collaterals and mascular scarring. The left eye shows multiple flame shaped and deep retinal hemorrhage with cotton wool spots covering almost the entire retina . The left optic disc is swollen and he has macular oedema the most likely daignoses is ;

a. Central retinal artery occlusion
b. Central retinal vein occlusion
c. Choroidal neovascular memberane involving the fovea
d. Papilloedema
e. Anterior ischaemic optic neuropathy

5. A 40 year old lady with a BMI of 30 and using oral contraceptives presents with transient obscuration of vision for last 1 month . She has also complains of headache for the last month . On examination her visual acuities are 6/6 both eyes with no pupillary defect. The intraocular pressures and distinct direct ophthalmoscopy are normal. On direct ophthalmoscopy both of her optic nerves are swollen with absent optic . The nerve fiber layer has multiple hemorrhages and cotton wool spots.The most likely diagnosis is ;

a. Bilateral ant Ischaemic optic neuropathy
b. Bilateral central retinal vein occlusion
c. Bilateral retinal retinal occlusion
d. Bilateral retinal vasculiti
e. Papilloedema

6. A 65 year old hypertensive man presents with sudden decrease in vision in the left eye For last 1 week. The right eye lost vision 3 years ago.The visual acuities are CF right and left eyes with no improvement in either eye with pin hole. The right eye has optic atrophy and with disc collaterals and mascular scarring . The left eye showed multiple flame shaped and deep retinal haemorrhages with cotton wool spots covering almost the entire retina. The optic disc is swollen and he has mascular aodema .the most likely diagnosis is:

a. Central retinal artery occlusion
b. Central retinal vein occlusion
c. Choroidal neovascular memberane involving the forvea.
d. Rapilloedema
e. Anterior ischaemic optic neuropathy

1.C	2.B	3.	4.B	5.B	6.B

THE MEDICO MENTOR

RETINAL DETACHMENT

1. A high myope young adult presents with ripid loss in the nasal field of his vision. It was presented by flashes and floaters .He also gives history of trivial trauma in playground ,few days back . What can be the cause of his problem?

a. Traumatic cataract
b. Vitreous hemorrhage
c. Keratoconus
d. Rehgmatogenous retinal detachment
e. Change in his refractive error

1. D

2. A 30 year gentleman complains of sudden loss of vision in the right eye for last 4 days. The unaided is CF right 6/36 left .The vision in the left eye improves to 6/6 with -5 diopter correction. The visual acuity does not improve in the right eye either with refraction or pin hole. He has a marked relative afferent pupillary defect. On slit lamp examination there are white blood cells in the vitreous. On direct ophthalmoscopy he has large retinal detachment elevating the muscula and extending 3 disc diameters on each side . In addition there are a few other discreet retinal detachments in the right eye. The most likely diagnosis is:

a. Vitreous Haemorrhage
b. Rhegmatogenous retinal detachment
c. Sreous retinal detachment
d. Central retinal artery occlusion
e. Central retinal vein occlusion

3. A 60 year old hypertensive gentle man with history of coronary artery bypass operations 2 year ago develops sudden decrease of vision in the left eye while performing Hajj 20 days ago.His visual acuities are 6/9 right eye and hand movement left eye with no improvement with pinhole.a refractive error of -7 and -8 right and left eye respectively and a left relative afferent pupillary defect. Anterior segments are normal and the intraocular pressures are within normal limits. On distinct direct opthalamoscopy there is yellow white fundal reflex .On slite lamp examination he has pigment cells in vitreous. On ophthalmoscopy the retina is undiluting with the movements of the eye and has a corrugated appearance with extensive lattice degeneration of the retina , The most likely diagnosis is:

a. Vitreous Haemorrhage
b. Rhegmatogenous retinal detachment
c. Serpus retinal detachment
d. Central retinal artery occlusion
e. Central retinal vein occlusion

4. A 50 year old man from bannu presents with rapidly decreasing vision in the right eye for the last few weeks. His vision is just perception of light in the right eye. He was previously seen by multiple ophthmologies including a vitreco retinal surgeon who diagnosed him as having inferior brech occlusion and infected him with intra vitreal Bevacizumab (Avastin) . On examination he has numerous white cells in the vitreous. There is retinits with thick white infiltrate of retina and deep retinal Haemorrhages along the inferior retinal vessels. The optic nerve is swollen. He is HIV positive and has CD4 count of 30. After a mouth of anti HIV therapy he develops retinal detachment. The correct diagnosis was:

a. Autoimmune uveitis
b. Behcer's uvetis
c. Cytomegalovirus retinits
d. Retinal toxoplasmosis
e. Retinitis proliferans

5. A man 65 year age was operated on his right eye for cataract with a Vision of CF .next day his visual acuity remain the same , following may be the reason for his poor visual acuity except;

a. Age related macular degeneration
b. Corneal Edema
c. Dilated pupil
d. Incorrect biometry
e. Retinal detachment

6. A 30 years old male with high myopia comes to the eye OPD with a two weeks history of photopsia decrease vision an floaters in his left eye .on examination his VA is CF and there is relative afferent pupillary defect and tobacco dust in the vitreous . Which one of the following is the most accurate diagnosis?

a. Choroidal detachment
b. Exudative R/D
c. Rhegmatogenous R/D
d. Retinoschistis
e. Tractional R/D

7. Relative afferent papillary defect(RAPD) is seen in;
a. A mature cataract
b. Hypertensive retinopathy
c. Retinal detachment
d. Viral kiratitis
e. Vitamin A diffecency

8. A 30 year gentleman complains of sudden painless decrease of vision in the right eye for the last 4 days . The unlaided vision is CF right and 6/36 left . The vision improves to 6/6 with -5 diopter correction in the left eye however it does not improve in the right eye either with refraction or pin hole. He has a right afferent pupillary defect. On slit lamp examination there are a few white blood cells in the vitreous . On direct ophthalmoscopy he has large retinal detachment centered on the macula extending 3 disc diameters on each side . In addition there are a few other discreate retinal detachments in the right eye. He recovered from flu a week ago. The most likely diagnosis is;
a. Valsalva retinopathy
b. Rhegmatogenous retinal detachment
c. Serous retinal detachment
d. Central retinal artery occlusion
e. Central retinal vein occlusion

9. A year old bank clerk who is otherwise healthy presents with sudden painless decrease of vision in the left eye since this morning. The vision in the left eye is 6/60 and don't improve with pinhole. He has a left relative afferent pupillary defect. For the last 1 week he has noticed photopsia and floaters in the left eye . He has been wearing glasses since the age of 6 years and his refractive error were recorded as -6 and -8 dioptres right and left eye respectively a year ago. Visual field examination shows an inferior altitudnal defect. The intraocular pressures are 10 and 5 mmHg right and left eye respectively. There is bilateral vitreous degeneration with pigment cells on microscopy in the left eye. Direct ophthalmoscopy reveals undulating retina. The most likely diagnosis is:
a. Left anterior ischaemic optic neuropathy
b. Left central retinal artery occlusion
c. Left central retinal vein occlusion
d. Left Rhegmatogenous retinal detachment
e. Left posterior vitreous detachment with vitreous hemorrhage

10. The procedure of choice for treatment of superior U-tear with shallow retinal detachment is;
a.ARGON laser retinopexy
b. Cryo- explant
c. Circumferential band
d. D-ACE
e. Pars plana vitrectomy

11. A 40 year old male presents with painless loss of vision. He said that he felt as if a certain was falling down in front of his eyes. On fundoscopy a grey opalescent retina is seen which is ballooning forward what is your diagnosis
a. Retinal detachment b. Chorodiatis
c. Malignant melanoma of chorid
d. Senile macular degeneration
e. Optic atrophy

2.C	3.B	4.C	5.C	6.C
7.C	8.C	9.D	10.C	11.A

RETINITIS PIGMENTOSA

1. In retinits pigmentosa ,the pathognomonic sign on fundas examination is:
a. Cotton wool spots
b. Hard exudates
c. Micro aneurysms
d. Bone spicule pigmentation along the blood vessels
e. Neo vascularization around the disc and in periphery
KEY: D

RETINOBLASTOMA

1. In retinoblastoma, the commonset complaint of parents at the time of presentation about their child is;
a. Buphthalmos b. Microphthalmia
c. Exophthalmos d. Leukocoria
e. Sticky discharge from the eyes

2. A 2½ year old male child is brought by his parents with cat eye reflex in his left eye for last 1 month . Now they feel that affected eye is bigger then the other eye. On examination there is a mild congestion and pupillary reflex in sluggish . One of his siblings has undergone left enucleation for almost same type of eye disease. What is the most probable diagnosis;

a. Left congenital cataract
b. Left congenital glucoma
c. Left persistent primary hyperplastic vitreous
d. Left retnoblastoma
e. Left traumatic cataract

3. The commonest presenting sign in retinoblastoma is;

a. White pupillary reflex b. Dilated pupil
c. Proptosis d. Squint e. Uveitis

4. The mother of a one and half year old child gives history of a white reflex for one eye from the past 1 month. On computed tomography scan of the orbit there is calcification seen within the globe . Most likely diagnosis is:

a. Coats disease b. Congenital cataract
c. Endophtalmitis d. Fabry's disease
e. Retinoblastoma

5. The most common primary orbital malignancy in childhood is;

a. Capillary Hemangioma b. Leukemia
c. Lymphangioma d. Rhabdomyosarcoma
e. Retinoblastoma

6. A 7 years old child is brought by his mother with leuco- coria in his right eye for the last one month . According to the mother there is a history of long contracts with puppies what is your most probable diagnosis?

a. Congenital cataract
b. Persistent primary hypoplastic vitreous
c. Retino blastoma
d. Retinopathy of prematurity
e. Toxocaric granuloma

7. A 2½ year old male child is brought by his parents with cat eye reflex in his left eye for last 1 month . Now they feel that affected eye is bigger then the other eye. On examination there is a mild congestion and pupillary reflex in sluggish . One of his siblings has undergone left enucleation for almost same type of eye disease. What is the most probable diagnosis;

a. Left congenital cataract
b. Left congenital glucoma
c. Left persistent primary hyperplastic vitreous
d. Left retnoblastoma
e. Left traumatic cataract

8. A 3 year old girl presented with loss of vision in the right eye for couple of months. Clinically the child has advanced retinoblastoma. The most common sight of retinoblastoma spread outside the eye is

a. Central nervous system b. Distal bones
c. Liver d. Lymph nodes
e. Skull bones

9. A 1 year old boy presented with retinoblastoma in the right eye for 2 months the least common presentation of this disease is

a. Strabismus b. Orbital cellulitis
c. Incidental finding d. Leukocoria
e. Decreased vision

1.D	2.D	3.A	4.E	5.E
6.E	7.D	8.A	9.B	--

8. NEURO OPTHALMOLOGY

1. Oculomotor nerve palsy cause all except;

a. Diplopia b. Downward deviation
c. Miosis d. Outward eye deviation
e. Ptosis

2. A fit 48 years old woman complains of a very severe headache and droopy left upper lid she gets double vision when she lifts up her eye lid?

a. Fifth cranial nerve palsy
b. Forth cranial nerve palsy
c. Seven cranial nerve palsy
d. Sexth cranial nerve palsy
e. Third cranial nerve palsy

3. A 56 year old Non _ insulin dependent diabast 15 years HbA1c of 10.4% and blood pressure of 190/100 mmHg suddenly develop right ptosis . The right eye is addicted . On oçular movement examination there is a failure of of addiction and elevation of right eye. There is no pupillary abnormalities and the rest of examination of cranial nerve is normal with no other neurological defects. The most likely diagnosis is;

a. Ponting infract b. Isolated 3rd nerve palsy
c. Isolated 4th nerve palsy d. Isolated 5th nerve palsy
e. Isolated 6th nerve palsy

4. A 25 year male sustains multiple fractures of the face in a car accident after the periorbital oedema has settled down the patient complains of double vision during reading and walking down stairs . On examination his visual acuities and pupils are normal . He has left hypertropia with head tilt to the right. On ocular movements testing the left hypertropia increases in right gaze. The most likely diagnosis is:

a. Abducens palsy b. Facial palsy
c. Oculomotor palsy d. Trochlear palsy
e. Trigeminal palsy

5. A 25 year male sustains multiple fractures of the face in a car accident after the periorbital oedema has settled down the patient complains of double vision during reading and walking down stairs . On examination his visual acuities and pupils are normal . He has left hypertropia with head tilt to the right. On ocular movements testing the left hypertropia increases in right gaze. The most likely diagnosis is:

a. Abducens palsy b. Facial palsy
c. Oculomotor palsy d. Trochlear palsy
e. Trigeminal palsy

6. A 55 years old daibetic lady presents with the complaint of horizontal diplopia for the last few days. Her diplopia get worse while,looking towards the right. On examination she is having 6/9 corrected VA in her both eyes. She is also having right convergent squint. Her disc are normal and she is having background daibetic retinopathy . What is the most probable cause for her diplopia ?

a. Right 3rd Nerve palsy b. Daibetic retinopathy
c. Right 6th nerve palsy d. External ophthalmopelgia
e. Right temporal retinal detachment

7. A patient presented with diplopia in primary position along with ptosis in left eye . The eye was devaited infrolaterally ,the diagnosis will be

a. Third nerve palsy b. Fourth nerve palsy
c. Fifth nerve palsy d. Sixth nerve palsy
e. Seventh nerve palsy

8. Bi temporal hemianopia is a characteristic feature of;

a. Glaucoma b. Optic neuritis
c. Papilloedema d. Pituitary tumor
e. Retinitis pigmentosa

9. Tarsorrhaphy is indicated in which of the following nerve palsy?

a. Second b. Third
c. Fourth d. Sixth e. Seventh

1.C	2.E	3.B	4.D	5.D
6.C	7.A	8.D	9.E	--

11. PAPPILEDEMA

1. A 40 year old lady with papilloedema underwent lumber puncture to check her CSF pressure. After the procedure she complains of postural headache and develops failure of abduction of left eye. The likely daignoses is;
a. Brainstem infraction
b. Cerebral infarction
c. Coning of the brain stem with left 6th nerve palsy
d. Medial longitudinal fascicle infraction
e. Ventricular hemorrhage

2. A 40 year old lady with papilloedema underwent lumber puncture to check her CSF pressure. After the procedure she complains of postural headache and develops failure of abduction of left eye. The likely daignoses is;
a. Brainstem infraction
b. Cerebral infarction
c. Coning of the brain stem with left 6th nerve palsy
d. Medial longitudinal fascicle infraction
e. Ventricular hemorrhage

3. A 39 year old man presents with visual symptoms ophthalmoscopy shows papilloedema which anatomical site is most likely to be affected
a. Optic nerve
b. Optic disc
c. Optic radiation
d. Oculomotor nerve
e. Optic chaismia

4. A 35 old woman presents with visual problems.CT brains reveals pituitary tumor. What is the single most likely defect ?
a. Homonymous hemianopia
b. Homonymous upper quadrantanopia
c. Bitemporal hemianopia
d. Binasal hemianopia
e. Homonymous lower quadrantanopia

1.C	2.C	3.B	4.C

13. OPTIC NEUROPATHY

1. A 62 year old hypertensive man with a BMI of 32 consults an ophthalmologist for sudden decrease in vision in right eye Sense this morning. His wife complains that he snores during sleep and it times she feels his Breathing has stopped. His corrected visual acuities is 6/36 right and 6/6 left. The visual acuity doesnot improve with pin hole and he has a right relative afferent pupillary defect. He also has an altitudnal visual field.deffect in the affected eye. The most likely diagnosis is:
a. Anterior ischaemic optic neuropathy
b. Lateral geniculate body infraction
c. Occipital infract
d. Parietal infract
e. Pituitary tumour affecting the chiasma

2. A tuberculosis patient on treatment complaining of decreased vision. O/E he has mild optic disc swelling and a visual acuity of 6/36 in both eyes.and red/ green color deficiency which drug is more likely to cause this:
a. Ethambutol
b. Isoniazid
c. Pyrizinamide
d. Rifamycin
e. Streptomycin

3. A 62 year old hypertensive man with a BMI of 31 consults an ophthalmologist for sudden painless decrease in vision in Rt eye since this morning. His wife complains that he snores during sleeping and at times she feels his Breathing has stopped his corrected visual acuity is 6/36 right and 6/6 left. The visual acuity does not improve with pin hole and he has a right relative afferent pupillary defect. On direct ophthalmoscopy inferior half of optic disc is swollen . He also has a superior altitudnal visual field defect in the effected eye. His fasting lipid profile shows hyperlipidemia . The most likely diagnosis is :
a. Anterior ischaemic optic neuropathy
b. Central retinal artery occlusion
c. Papilloedema
d. Pituitary tumour affecting the chiasma
e. Optic neuritits

1.A	2.A	3.A

OPTIC NEURITIS

1. A 30 year old lady with fair complexion complains of sudden decrease in vision in her right eye for the last 3 days. Her visual acuities are 6/24 right and CF close to eye and they do not improve with pinhole. She has a marked relative afferent pupillary defect in the right eye. She was daignosed as having left anisometropic ambylopia at the age of 8 years. She also complains of pain in the right eye on eye movements. On distinct and direct ophthalmoscopy there is no difference between both eyes and they appear normal . She has a central scotoma in the right eye on visual field examination . The most likely diagnosis in the right eye is:

a. Central retinal artery occlusion
b. Central retinal vein occlusion
c. Macular oedema .
d. Non arteric anterior ischaemic optic neuropathy
e. Retrobulbar optic neuritis

2. An ophthalmologist is demonstrating pupillary light reflexs with the house officers. Regarding relative efferent pupillary defect it is the result of a lesion in;

a. 3rd nerve
b. Optic nerve
c. Pretectal nuleous
d. Ciliary ganglion
e. Sphincter pupillare muscle

3. A 30 year old female presents to the eye clinic with an acute history of mild pain on eye movements and blurring in the right eye.Examination results a visual acuity of 6/36 in the right eye but 6/6 in the left eye. a central sectoma in the right eye with a right swollen optic disc . What is the most likely diagnosis?

a. Central retinal artery occlusion
b. Central retinal vein occlusion
c. Optic neuritis
d. Papilloedema
e. Retinal detachment

4. A 25 years female presented to the eye OPD with history of sudden loss of vision in her right eye . On examination her VA is 6/60. In the effected eye and there is relative afferent papillary defect and defective color vision with normal fundas. What is your diagnosis?

a. Ambylopia
b. Anterior ischaemic optic neuropathy
c. Leber hereditary optic neuropathy
d. Retrobulbar optic neuritis
e. Toxic optic neuropathy

5. A 70 year old daibetic and hypertensive man complains of not being able to see on right side on examination his visual acuities are 6/6 of both eyes with no relative afferent pupillary defect. He has right hemianopia on visual field examination . In this patient the most unlikely diagnosis are;

a. Optic neurititis right eye
b. Ischemia of optic radiation
c. Ischaemia of lateral geniculate body
d. Occipital lobe infract
e. Parietal lobe

6.30 year old lady with fair complexion complains of sudden decrease in vision in her right eye with dull ache in the affected eye.Her visual acuities are 6/24 right and CF close to eye. The visual acuity does not improve with pinhole.She has a marked relative pupillary defect in the Right eye.She was diagnosed as having left anisometropic ambylopia at the age of 8 years .she also complains of the pain in the right eye on eye movements . On distinct and direct ophthalmoscopy the optic discs ,retinea and it's blood vessels appear normal . She has a central sectoma in the right eye on visual field examination the most likely diagnosis is:

a. Right central retinal occlusion
b. Right central retinal vein. Occlusion
c. Right macular oedema
d. Right non arteritic anterior ischaemic optic neuropathy
e. Right retrobulbar optic neurititis

1.E	2.B	3.C	4.D	5.A	6.E

14. SYMPATHETIC OPHTALMITIS

1. A 30 year old metal worker sustains trauma to his right eye with a metal rod. He is found to have corneal rapture with iris prolapse. He is operated upon general anesthesia during the surgery the iris is abscised and corneal wound repaired with interrupted sutures ,4 weeks later he presents with pain, photophobia floaters and decrease vision in left eye. On examination the visual acuity is 6/12 with normal intra ocular pressure. He has inflammatory cells in anterior chamber and vitreous with choroidal nodule. There are deposits of inflammatory cells on the corneal endothelium but no corneal staining the most likely diagnosis is;

a. Conjunctivitis
b. Keratitis
c. Low tension glaucoma
d. Scleritis
e. Sympathetic ophthamia

KEY: E

MACULA

1. The insertion of interior oblique is immediately adjacent to;

a. Lachrymal sac
b. Macula
c. Nasolacrimal duct
d. Optic foramen
e. Superior orbital fissure

2. An 80 years old Caucasian female complains of recent problems with reading vision specifically words appearing distorted and blank patches being present. The most probable cause is

a. Acute angle closure glucoma
b. Age related macular degeneration
c. Anterior ischaemic optic neuropathy
d. Cataract
e. Central retinal artery occlusion

3. A 30 year old hospital worker presents to the eye outpatients with decreased vision in the left eye for last 3 days. He is examined by an ophthalmologist. The visual acuities are 6/6 and 6/12 right and left eye respectively. He is told that he has normal sight. He presents the following morning to another ophthalmologist who notices that he has relative afferent pupillary defect. And on confrontation visual field examination he has bitemporal heminopia.the left eye shows mild optic disc pallor with clinically normal maculea. All except one of the following investigation is appropriate in this case;

a. Automated visual field examination
b. Plain X rays of pituitary
c. MRI of pituitary
d. CT of pituitary
e. Ocular coherence tomography of macula

4. A 75 year old man declining vision ,cornea and pupils are normal ,fundus shows obscured margines. What is the single most likely diagnosis;

a. Macular degeneration
b. Hypertensive retinopathy
c. Multiple sclerosis
d. Daibetic background
e. Proliferative DM retinopathy

5. 84 year old woman with Drusen and yellow spots in the center of retina. What is the single most likely diagnosis?

a. Macular degeneration
b. Hypertensive retinopathy
c. Multiple sclerosis
d. DM background
e. Proliferative diabetic retinopathy

1.B	2.B	3.E	4.A	5.A

HINT AND EXPLANATION

UVEA

ANTERIOR UVEITIS

1. Ankylosing spondylitis.
Acute anterior uveitis is an inflammation of the iris and ciliary body in the eye. It is frequently linked to certain underlying conditions. One of the most common associations is with ankylosing spondylitis, which is a type of inflammatory arthritis that primarily affects the spine and sacroiliac joints. While the other options (allergic conjunctivitis, toxoplasmosis, sarcoidosis, and Marfan's syndrome) can also cause eye-related issues, they are not as commonly associated with acute anterior uveitis in young individuals as ankylosing spondylitis.

2. a. Acute anterior uveitis.
The sudden dimness of vision in the right eye, circumcorneal congestion, keratic precipitates (KPs), flare, and cells in the anterior chamber, along with the posterior synechiae observed at 10 O'clock, are characteristic features of acute anterior uveitis. Acute anterior uveitis is an inflammation of the iris and ciliary body inside the eye. It can be associated with systemic conditions like ankylosing spondylitis, reactive arthritis, or may occur as a result of medication side effects, as in the case of NSAIDs.

3. D: Cells in anterior chamber.
Acute anterior uveitis is characterized by inflammation in the front part of the eye, and the presence of cells in the anterior chamber is a key clinical feature used to diagnose this condition. While options A, B, C, and E may also be associated with uveitis, the presence of cells in the anterior chamber is considered more specific and reliable for diagnosis.

4. C. Herpes simplex anterior uveitis.
This conclusion is based on the clinical presentation of a 40-year-old female with blurred vision of the right eye for the last 10 days, along with findings of ciliary congestion, small keratic precipitates on the endothelium, and numerous cells in the anterior chamber. These features are typical of anterior uveitis, and the presence of cells in the anterior chamber may suggest an infectious etiology, making herpes simplex virus a probable cause.

5. d. Miosed and irregular with poor reaction.
In acute anterior uveitis, the pupil is typically constricted (miosed) due to inflammation and irregular in shape. Additionally, the reaction of the pupil to light is usually poor or sluggish because of the inflammatory process affecting the eye. The combination of these signs helps in diagnosing acute anterior uveitis, also known as iritis.

6. A. Acute anterior uveitis.
The patient's sudden dimness of vision in the right eye, along with the presence of circumcorneal congestion, keratic precipitates, +3 cells in the anterior chamber, and posterior synechiae at 10 o'clock on slit lamp examination, all point towards acute anterior uveitis. The backache and NSAID use could be associated with certain conditions that may trigger uveitis.

7. d. Miosed and irregular with poor reaction.
In acute anterior uveitis, the pupil becomes constricted (miosed) and may exhibit an irregular shape due to inflammation and adhesions between the iris and lens. Additionally, the reaction to light is poor due to the inflammation affecting the normal pupillary response.

8. b. Anterior uveitis.
The presence of peri-limbal conjunctival congestion and pupillary miosis (constriction) suggests anterior uveitis. This condition involves inflammation of the uvea, which includes the iris, ciliary body, and chorold. It can lead to a significant decrease in vision and is often associated with symptoms like eye redness and pain.

9. B. Sarcoidosis.
Sarcoidosis is a multisystem inflammatory disease that can affect various organs, including the eyes. It can cause uveitis, and the presence of bilateral and symmetric hilar adenopathy on chest X-ray, along with elevated serum ACE level, are typical findings in sarcoidosis.

UVEA/RETINA/NEUROOPHTALMOLOGY

10. E. Uveitis.
Uveitis is a general term for inflammation of the uvea, which includes the iris, ciliary body, and choroid. Ocular involvement, particularly uveitis, is a common feature of Reiter's syndrome, along with joint inflammation (arthritis) and urethritis.

11. D. Keratic precipitates.
Acute uveitis is characterized by the inflammation of the uvea, which includes the iris, ciliary body, and choroid. Keratic precipitates refer to inflammatory cells that settle on the corneal endothelium. They are a hallmark sign of uveitis and can help differentiate it from other eye conditions. The other symptoms listed, such as floaters, diffuse redness of the conjunctiva, and photophobia, can also occur in uveitis, but keratic precipitates are a specific and distinct feature of this condition.

POSTERIOR UVEITIS

01. C. Exudative retinal detachment
This occurs when fluid accumulates between the layers of the retina, causing detachment. Other complications such as rhegmatogenous retinal detachment, dislocation of the lens, and pupillary block glaucoma can also occur but are less commonly associated with severe posterior uveitis. Vitreous loss is not typically a direct complication of uveitis.

02. B. Toxoplasmosis
The most common cause of posterior uveitis in the pediatric population is Toxoplasmosis. It's an infection caused by the parasite Toxoplasma gondii, and it can lead to inflammation in the back of the eye. This infection can be acquired congenitally or postnatally.

2. RETINA

01. a. Color blindness
Synoptophore is an ophthalmic device used for various types of binocular vision assessment and treatment. It is not designed to evaluate or address color vision deficiencies. Instead, it is commonly used for the assessment of depth perception (Option b), esotropia (Option d), exotropia (Option e), and abnormal retinal correspondence (Option c).

Depth perception assessment with a synoptophore involves determining how well both eyes work together to perceive depth and three-dimensional space. In cases of esotropia or exotropia, the synoptophore helps evaluate the degree of misalignment of the eyes and aids in the management of these conditions. Abnormal retinal correspondence is a condition where the visual information from corresponding retinal points does not fuse correctly, leading to abnormal binocular vision. The synoptophore helps in diagnosing and treating such cases.

02. B. 0.9%
Based on the statistics, the prevalence of blindness among individuals of all ages in Pakistan is estimated to be 0.9%

03. The correct option for the most common cause of blindness in the working-age population (age 16-64) is e. Retinal conditions. such as Diabetic Retinopathy.

04. c. Corticosteroids.
The patient's presentation is suggestive of optic neuritis, which is an inflammation of the optic nerve. Optic neuritis can cause sudden vision loss, and the neurological symptoms (weakness and exaggerated reflexes) indicate possible involvement of the central nervous system.
Corticosteroids, such as intravenous methylprednisolone, are the standard treatment for acute optic neuritis. They help reduce inflammation and may hasten recovery of vision and neurological symptoms.

05. B. Pilocarpine eye drops
This patient has primary open angle glaucoma. The intraocular pressure rise in POAG is generally more than 21mm hg with characteristic optic cupping and specific visual field defects. It is also called chronic adult glaucoma since its onset occurs in the 5th-7th decade (50-70 years) of life. The aqueous humour slowly gets accumulated in the posterior chamber, followed by the anterior chamber filling. This filling compresses the lens which in turn

compresses backwards, affecting the optic disc and thus causing visual field defects.

Symptoms of POAG

- Visual field defects- Scotoma
- Headache and pain in the eye
- Frequent changes of glasses
- Dark adaptation

Treatment

- Drugs which Increase the flow of aqueous humour- LAP (Latanoprost, Adrenergic drugs such as epinephrine. Pilocarpine)
- Drugs which Decrease the production of aqueous humour- BD (Topical beta blockers, dorzolamide, carbonic anhydrase inhibitor)

3. DIABETIC RETINOPATHY

1. b. Good metabolic control of diabetes Maintaining stable blood sugar levels through proper diabetes management helps reduce the risk of worsening retinopathy. The other options mentioned (YAG laser capsulotomy, pan retinal photocoagulation, vitrectomy with silicone oil injection, and subconjunctival injection of steroids) are not typically used to prevent the progression of diabetic retinopathy at this stage.

2. D. Sub hyaloid hemorrhage

A subhyaloid hemorrhage refers to bleeding that occurs between the retina and the vitreous membrane, specifically in the space known as the subhyaloid space. The vitreous membrane is a clear gel-like substance that fills the space between the lens and the retina within the eye. When a blood vessel ruptures in this area, blood can accumulate and pool between the retina and the vitreous membrane, causing a hemorrhage. Subhyaloid hemorrhages often result in visual disturbances because the accumulated blood can obstruct light from reaching the retina and impair normal vision. The appearance of a "boat-shaped" hemorrhage with a sharp demarcation obscuring the macula and blood vessels is a characteristic finding in cases of subhyaloid hemorrhage. The condition can be associated with various underlying causes, including retinal vascular disorders or trauma.

3. b. Isolated 3rd Nerve Palsy.

The presence of right ptosis, right eye adducted with failure of adduction and elevation, along with normal pupillary function and the absence of other neurological deficits, suggests an isolated third nerve (oculomotor nerve) palsy. This can be associated with diabetes and hypertension, which are risk factors for microvascular damage to the nerve.

4. b. Macular edema

Diabetic macular edema (DME) occurs when fluid accumulates in the macula, the central part of the retina responsible for detailed vision. Elevated blood sugar levels in diabetes can damage blood vessels in the retina, causing them to leak fluid into the macula. This leads to swelling and distortion of the macula, which can result in blurry or distorted central vision. While other conditions such as cataract, retinal detachment, vitreous hemorrhage, and opaque membranes in the vitreous can also contribute to vision loss in diabetic patients, macular edema is one of the most common and significant causes of visual impairment in individuals with diabetes.

5. a. As early as feasible

It's important for individuals with diabetes to have regular eye examinations to detect any early signs of diabetic retinopathy, a common eye condition that can lead to vision loss. Early detection and management of diabetic retinopathy can help prevent or delay vision problems.

The American Diabetes Association (ADA) recommends that people with diabetes have a comprehensive eye exam shortly after diagnosis and then annually thereafter. This is because diabetic retinopathy can develop and progress even in the early stages of diabetes, before noticeable symptoms occur. Therefore, early and regular eye exams are essential to ensure early detection and appropriate management.

6. c. Diabetic Macular Edema
Diabetic macular edema occurs when fluid accumulates in the macula, the central part of the retina responsible for detailed vision. This condition can result in blurry or distorted central vision, which significantly affects a person's ability to see fine details and perform tasks that require clear vision. It's important to manage and treat diabetic macular edema to preserve and improve visual function.

07.D. Sub hyaloid hemorrhage
A subhyaloid hemorrhage refers to bleeding that occurs between the retina and the vitreous membrane, specifically in the space known as the subhyaloid space. The vitreous membrane is a clear gel-like substance that fills the space between the lens and the retina within the eye. When a blood vessel ruptures in this area, blood can accumulate and pool between the retina and the vitreous membrane, causing a hemorrhage. Subhyaloid hemorrhages often result in visual disturbances because the accumulated blood can obstruct light from reaching the retina and impair normal vision. The appearance of a "boat-shaped" hemorrhage with a sharp demarcation obscuring the macula and blood vessels is a characteristic finding in cases of subhyaloid hemorrhage. The condition can be associated with various underlying causes, including retinal vascular disorders or trauma.

8. d. Retinal ischemia.
In diabetic retinopathy, retinal ischemia (lack of adequate blood flow to the retina) triggers the release of certain factors that promote the growth of new blood vessels. These new vessels are abnormal and fragile, leading to complications such as vitreous hemorrhage and fibrovascular proliferation, which can cause severe vision problems if left untreated. The formation of these new vessels is a key characteristic of proliferative diabetic retinopathy, an advanced stage of the disease.

09. e. Neovascularization of the retina.
Proliferative diabetic retinopathy is characterized by the growth of abnormal new blood vessels (neovascularization) on the retina. These new vessels are fragile and can lead to serious complications like vitreous hemorrhage and tractional retinal detachment, which may cause severe vision loss if not treated promptly. The presence of neovascularization in the retina is a key diagnostic feature of this advanced stage of diabetic retinopathy.

10. Background diabetic retinopathy with large exudates involving the macula is a more advanced and potentially vision-threatening stage of diabetic retinopathy. Macular involvement can lead to significant vision loss if not managed promptly.

11. These findings are characteristic of early stages of diabetic retinopathy, which is a common complication of diabetes and includes micro-aneurysms and hard exudates. Proliferative diabetic retinopathy involves more advanced stages of the disease and is characterized by the growth of new blood vessels, which is not described in the question

12. Roth Spots are defined as a white-centered retinal hemorrhage and are associated with multiple systemic illnesses, most commonly bacterial endocarditis. Potential etiologies of Roth's spots include

Subacute bacterial endocarditis
Leukemia
Myeloma
Anemia
Anoxia
Carbon monoxide poisoning
Prolonged intubation during anesthesia
Preeclampsia
Hypertension
Diabetic retinopathy
HIV retinopathy
Vitamin B12 deficiency
Complicated labor and traumatic delivery in mothers and neonates
Shaken baby syndrome
Intracranial hemorrhage from arteriovenous malformation or aneurysm

Acute reduction of intraocular pressure following trabeculectomy

13. The presence of new blood vessels all over the retina in a diabetic patient indicates proliferative diabetic retinopathy. Laser photocoagulation is a common treatment used to target and destroy these abnormal blood vessels, preventing further vision loss and potential complications. Strict sugar control and regular eye checkups are important aspects of managing diabetes, but in this scenario, laser photocoagulation is the primary intervention to address the proliferative retinopathy.

4. HYPERTENSIVE RETINOPATHY

1. Relative Afferent Pupillary Defect (RAPD), also known as Marcus Gunn pupil, is not typically seen in "Hypertensive retinopathy." RAPD is an abnormal response of the pupil to light and is usually caused by differences in the light input between the two eyes due to optic nerve or retinal abnormalities. It can be detected when shining a light into one eye causes both pupils to constrict, but when the light is quickly moved to the other eye, the affected eye's pupil dilates instead of constricting.

RAPD is commonly associated with conditions such as optic neuritis, optic atrophy, glaucomatous optic neuropathy, and retinal detachment. However, hypertensive retinopathy primarily affects the blood vessels in the retina due to high blood pressure and typically doesn't lead to the same kind of optic nerve or retinal dysfunction that would cause a RAPD.

02. Nifedipine is a calcium channel blocker used to treat hypertension. Flame-shaped hemorrhages are characteristic retinal findings associated with hypertensive retinopathy. These hemorrhages occur due to the increased pressure in the retinal blood vessels, causing leakage of blood into the surrounding retina.Changes on Fundoscopy are:

- AV nicking (where an artery crosses a vein)
- Copper or silver wiring (attenuation of artery)
- Cotton wool spots
- Flame shaped hemorrhage
- Optic disk oedema and ischemic changes

Macular degeneration (Option A) is an age-related condition that affects the macula and does not typically present with flame-shaped hemorrhages. DM background (Option C) refers to the early stage of diabetic retinopathy, and proliferative DM retinopathy (Option D) is a later stage characterized by neovascularization. SLE (Systemic Lupus Erythematosus) (Option E) is an autoimmune disease that can affect multiple organs, but flame-shaped hemorrhages are not a typical retinal manifestation of SLE.

5. CRAO CENTRAL RETINAL ARTERY OCCLUSION

1. The sudden deterioration of vision, relative afferent pupillary defect (RAPD), swollen and white retina, and the presence of a cherry red spot at the macula are indicative of central retinal artery occlusion. This condition occurs when the blood flow to the central retinal artery is blocked, leading to severe visual impairment.

2. The given clinical presentation, including a sudden painless decrease in vision, cherry red spot on the right fundus, and a relative afferent pupillary defect (RAPD), is suggestive of **central retinal artery occlusion**. The most common underlying cause of central retinal artery occlusion is embolism, often originating from the carotid arteries or the heart. Therefore, investigations such as **carotid auscultation, carotid Doppler, blood pressure checking, and echocardiography** are relevant to identify potential sources of emboli. Vertebral artery angiography is not typically performed for this particular scenario.

3. In this condition, when the central retinal artery that supplies blood to the inner layers of the retina becomes blocked, it can lead to sudden and severe visual impairment. An afferent pupillary defect (also known as a Marcus Gunn pupil) is a key clinical finding in cases of central retinal artery occlusion. This defect causes the affected pupil to appear less responsive to light compared to the unaffected pupil when both are stimulated, indicating a dysfunction in

the affected eye's optic nerve pathway. While other symptoms and signs such as disc edema, venous tortuosity, flame-shaped hemorrhages, and vitreous hemorrhage can occur in different ocular conditions, they are not the primary defining features of central retinal artery occlusion.

4.The sudden and severe visual loss, afferent pupillary defect, diffuse retinal edema, and cherry red spot at the macula are characteristic findings of central retinal artery occlusion. In this condition, there is a blockage of blood flow to the retina, leading to retinal ischemia and edema. The cherry red spot at the macula occurs due to the relative lack of blood flow in the macular area, highlighting the healthy choroidal blood supply against the pale ischemic retina.

5. The presence of a cherry red spot in the macular area of the retina is seen in c. Central retinal artery occlusion (CRAO).

Central retinal artery occlusion is a condition where the main artery supplying blood to the retina becomes blocked, leading to sudden and painless loss of vision in the affected eye. The cherry red spot is a characteristic finding in the macular area of the retina during a CRAO. The macula, which is responsible for central vision, appears red due to the contrast between the pale, ischemic retina and the relatively normal color of the macular area.

Options a, b, d, and e are not associated with the cherry red spot in the macular area. Age-related macular degeneration (Option a) is a common condition affecting the macula, but it does not typically present with a cherry red spot. Central chorio retinitis (Option b) is not a recognized medical term, and its association with a cherry red spot is not well-established. Central retinal vein occlusion (Option d) presents with retinal vein engorgement, hemorrhages, and macular edema, but not a cherry red spot. Central serous retinopathy (Option e) is characterized by a serous detachment of the neurosensory retina and does not involve a cherry red spot.

6. The sudden profound loss of vision in the right eye, associated with severe pain over the right temple, and the presence of a cherry red spot on the macula are suggestive of central retinal artery occlusion. The pale, swollen retina with attenuated retinal vessels and the absence of blood supply to the retina are also consistent with this diagnosis. The excruciatingly tender frontal branch of the superficial temporal artery and elevated ESR suggest temporal arteritis, which can lead to occlusion of the central retinal artery.

7. Other findings of central retinal artery occlusion include.

Cherry red spot
Arteriole narrowing
Ground glass retina
Pale optic disc

6. CRVO: CENTRAL RETINAL VEIN OCCLUSION.

1. Neovascular glaucoma occurs due to the growth of abnormal blood vessels (neovascularization) on the iris and angle of the eye. This abnormal blood vessel growth is often triggered by the ischemic (lack of blood flow) effects of a central retinal vein occlusion. As a result, new blood vessels form in an attempt to restore blood flow, but these vessels are fragile and can lead to increased intraocular pressure, causing glaucoma.

2. Central retinal vein occlusion is a vascular disorder that occurs when the main vein draining the retina becomes blocked, leading to impaired blood flow and subsequent retinal hemorrhages and edema. The patient's presentation of sudden vision loss, multiple flame-shaped and deep retinal hemorrhages, cotton wool spots covering almost the entire retina, swollen optic disc, and macular edema are consistent with the characteristic features of CRVO. The right eye's optic atrophy with disc collaterals and macular scarring may be a result of a previous ischemic event, possibly a resolved CRVO.

4. The symptoms and findings, such as sudden decrease in vision, flame-shaped hemorrhages, cotton wool spots, optic disc swelling, and macular

edema, are indicative of a central retinal vein occlusion. This occurs when there is a blockage in the retinal vein, leading to impaired blood flow and subsequent retinal damage.

5. The presence of transient obscurations of vision, swollen optic nerves with absent optic cups, multiple hemorrhages, and cotton wool spots align with the characteristic findings of CRVO.

6. Based on the described clinical features, the most likely diagnosis is "Central Retinal Vein Occlusion (CRVO)." The sudden decrease in vision, multiple flame-shaped and deep retinal hemorrhages, cotton wool spots, swollen optic disc, and macular edema are characteristic of CRVO. The presence of optic atrophy, disc collaterals, and macular scarring in the right eye also points towards chronic retinal venous congestion, which aligns with CRVO.

7. RETINAL DETACHMENT

1. Rhegmatogenous retinal detachment is a condition in which the retina detaches from the underlying tissue due to a break or tear in the retina. It commonly presents with flashes and floaters, followed by rapid loss of vision, often starting in the peripheral (nasal) field. The history of trivial trauma in the playground could have caused the retinal tear or break, leading to the detachment.

Options a, b, c, and e are less likely based on the clinical presentation. Traumatic cataract (Option a) could occur after significant trauma to the eye, but it would not typically present with flashes, floaters, and rapid vision loss. Vitreous hemorrhage (Option b) involves bleeding into the vitreous gel, causing visual disturbances, but it is not usually associated with retinal detachment. Keratoconus (Option c) is a corneal disorder that leads to progressive thinning and steepening of the cornea, causing irregular astigmatism, but it does not cause flashes, floaters, or retinal detachment. A change in refractive error (Option e) might cause blurry vision but would not explain the presence of flashes, floaters, and rapid loss of the nasal field of vision.

2. The presence of white blood cells in the vitreous might indicate an inflammatory response contributing to the serous retinal detachment

3. Shafer sign ("tobacco dust")This is pathognomonic for retinal breaks and detachments. Shafer sign describes visualization of pigment granules in the anterior vitreous. These pigment granules come from the RPE. In rhegmatogenous retinal detachment the retina has breaks, folds and undulations, it appears corrugated while in Exudative/serous retinal detachment retina appears smooth. Retinal degenerations such as Lattice degeneration (most common) is a predisposing factor for rhegmatogenous retinal detachment.

4. CMV retinitis is a viral infection of the retina caused by the cytomegalovirus, primarily affecting individuals with compromised immune systems, such as those with HIV/AIDS. The presence of numerous white cells in the vitreous, retinitis with thick white infiltrate of the retina, deep retinal hemorrhages, and optic nerve swelling are characteristic features of CMV retinitis. In this case, the patient's HIV-positive status with a low CD4 count (30) indicates severe immunosuppression, making him vulnerable to opportunistic infections like CMV retinitis. The patient's rapidly decreasing vision, despite prior treatment with intra-vitreal Bevacizumab, further supports the diagnosis of CMV retinitis.

The development of retinal detachment after a month of anti-HIV therapy is also consistent with the progression of CMV retinitis, which can cause significant damage to the retina and increase the risk of retinal detachment in immunocompromised individuals.

5. c. Dilated pupil

1. Age-Related Macular Degeneration (AMD) could potentially cause poor vision after cataract surgery, as it affects the macula and can lead to central vision loss.

2. Incorrect Biometry refers to inaccurate measurements of the eye's structures before cataract

surgery, which can lead to poor postoperative visual outcomes.

3. Corneal Edema can occur due to the surgical procedure itself or as a reaction to the intraocular lenses used in cataract surgery. This can temporarily affect vision.

4. Dilated Pupil typically doesn't cause a significant and persistent reduction in visual acuity. While it might cause increased sensitivity to light and difficulty focusing, it wouldn't likely result in continuous poor vision.

5. Retinal Detachment is a serious postoperative complication that can lead to poor vision if the retina becomes detached.

6. C. Rhegmatogenous retinal detachment

Predisposing factors for rhegmatogenous retinal detachment

Age—Most common 40–60 years

Ÿ Sex—Male: Female: 3:2

Myopia—40 percent cases

Ÿ Aphakia (previous cataract surgery)

Ÿ Retinal degenerations such as Lattice degeneration (most common)

Ÿ Trauma

Ÿ Senile posterior vitreous detachment (PVD).

7. C. Retinal detachment

8. c. Serous retinal detachment

The presence of white blood cells in the vitreous might indicate an inflammatory response contributing to the serous retinal detachment

09. D. Left rhegmatogenous retinal detachment

Photopsia (flashes of light) due to vitreoretinal traction

Ÿ Dark spots (floaters) in front of the eyes (muscae volitantes)

Localized relative loss in the field of vision of detachment retina

Ÿ; Loss of vision in detachments involving macular area.

10. C. Cryo-explant.

Cryo-explant is a surgical procedure used to treat retinal tears and detachments. In this procedure, cryotherapy (freezing) is applied to the area around the U-shaped retinal tear to create an adhesive scar, securing the retina back in place. The term "explant" refers to the use of an external support, such as a sponge or buckle, to push against the retinal tear and help maintain its position. Cryo-explant is often preferred for superior U-shaped retinal tears with shallow retinal detachment, as it provides a more localized treatment to the specific area of the tear and offers a high success rate in reattaching the retina.

11. A. Retinal detachment

The patient, a 40-year-old male, presents with painless loss of vision and describes a sensation of a curtain falling. These symptoms are highly suggestive of a retinal detachment. Retinal detachment occurs when the light-sensitive retina at the back of the eye detaches from its normal position, leading to vision loss.

Options B, C, D, and E are less likely based on the clinical presentation and the patient's description of symptoms. Choroiditis (Option B) is an inflammation of the choroid layer, and malignant melanoma of the choroid (Option C) is a rare cancer that affects the pigmented layer beneath the retina. Senile macular degeneration (Option D) is an age-related condition that affects the macula, causing gradual central vision loss. Optic atrophy (Option E) refers to the degeneration or damage to the optic nerve, which typically results in a gradual, painless loss of vision.

8. RETINITIS PIGMENTOSA

1. d. Bone spicule pigmentation along the blood vessels

In retinitis pigmentosa, the pathognomonic sign on fundus examination is bone spicule pigmentation along the blood vessels. This condition is characterized by the accumulation of pigment deposits in the retina, leading to the appearance of spicule-shaped pigmentation patterns that radiate from the blood vessels. These bone spicules are

typically found in the peripheral retina and are one of the key diagnostic features of retinitis pigmentosa. The condition causes progressive degeneration of the retina, leading to night blindness and gradual loss of peripheral vision. Cotton wool spots, hard exudates, microaneurysms, and neovascularization are not typical findings in retinitis pigmentosa.

9. RETINOBLASTOMA

1. d. Leukocoria

In retinoblastoma, the commonest complaint of parents at the time of presentation about their child is leukocoria. Leukocoria is an abnormal white reflection from the retina that can be noticed in photographs taken with a flash. It is often described as a "white pupillary reflex" or "cat's eye reflex." Leukocoria is a significant sign of retinoblastoma and warrants immediate medical attention.

Buphthalmos, microphthalmia, exophthalmos, and sticky discharge from the eyes are not typical complaints associated with retinoblastoma.

02. d. Left retinoblastoma.

The presence of a "Cat Eye Reflex" or leukocoria in the left eye, along with mild congestion and sluggish pupillary reflex, raises suspicion for retinoblastoma. Retinoblastoma is a rare and aggressive eye cancer that primarily affects young children. It typically presents with leukocoria, which is the appearance of a white reflection in the affected eye.

The family history of a sibling undergoing enucleation for almost the same type of eye disease further supports the possibility of retinoblastoma in this case.

03. a. White papillary reflex,

also known as leukocoria or "Cat Eye Reflex." Leukocoria is the appearance of a white or pale reflection in the pupil instead of the normal red reflex seen during eye examinations. It is a classic and early sign of retinoblastoma, a rare and aggressive eye cancer that primarily affects young children. The presence of leukocoria in a child's eye should raise immediate concern.

4. E. Retinoblastoma

Retinoblastoma is a rare eye cancer that typically occurs in young children. The presence of a white reflex, also known as leukocoria, along with calcification seen within the globe on a CT scan, are common indicators of retinoblastoma.

05. E. Retinoblastoma

Retinoblastoma is a malignant tumor that develops in the retina of the eye, primarily affecting children. It often presents with leukocoria (white reflex) or strabismus (crossed eyes).

06. E. Toxocaric granuloma

Toxocaric granuloma is caused by the migration of the larvae of the Toxocara roundworm into the eye. It can lead to visual disturbances and other eye-related symptoms.

07. d. Left retinoblastoma.

Retinoblastoma is a rare and aggressive eye cancer that occurs in young children, typically before the age of 5. One of the classic clinical signs of retinoblastoma is the "Cat Eye Reflex" or leukocoria, which is the appearance of a white reflection in the affected eye instead of the normal red reflex seen in healthy eyes. The progressive prominence of the "Cat Eye Reflex" in the left eye, along with the presence of mild congestion and an opaque pupil, raises suspicion for retinoblastoma. Moreover, the family history of a sibling undergoing enucleation for the same eye disease further supports this diagnosis.

08. A. Central Nervous System

The most common site of retinoblastoma spread outside the eye is the Central Nervous System (CNS). Retinoblastoma is a malignant tumor that arises from the immature cells of the retina, the light-sensitive tissue at the back of the eye. In advanced cases, the tumor may extend beyond the eye and spread to other parts of the body. The most common site for metastasis of retinoblastoma is the CNS, particularly the brain and meninges.

Options B, C, D, and E are possible sites of metastasis, but the CNS remains the most common location for retinoblastoma to spread outside the eye.

09. B. Orbital cellulitis

Retinoblastoma is a malignant tumor that arises from the immature cells of the retina, the light-sensitive tissue at the back of the eye. It commonly presents with leukocoria (a white pupillary reflex) or a noticeable white reflection in photographs taken with flash, especially in children. Decreased vision can also be a presenting symptom, depending on the size and location of the tumor. Strabismus (misalignment of the eyes) can occur as a consequence of retinoblastoma affecting the vision in one eye. While retinoblastoma can cause inflammation and pain if it leads to secondary complications, such as orbital cellulitis, it is much less common compared to other presenting symptoms like leukocoria, decreased vision, or strabismus.

10. NEURO OPHTHALMOPATY

04. d. Trochlear Palsy.

Diplopia when looking to opposite to the lesion. Patients tilt their head opposite the lesion to compensate. Diplopia when reading & walking down the stairs. The trochlear nerve controls the superior oblique muscle, which is responsible for the downward and inward movement of the eye. A fourth nerve palsy can lead to difficulty in depressing the affected eye, resulting in hypertropia and vertical diplopia (double vision). Head tilt is often seen as the patient tries to minimize diplopia. Normal visual acuity and pupils help differentiate trochlear nerve palsy from other cranial nerve issues that might affect visual function or pupillary responses.

06. C. Right 6th nerve palsy

The 6th cranial nerve controls the lateral movement of the eye, and its dysfunction can lead to an inability to move the eye outward. This can result in horizontal diplopia, especially when looking towards the side of the affected eye

08. . Pituitary tumor

This type of visual field defect occurs when there is compression or involvement of the optic chiasm, which is located near the pituitary gland. The optic chiasm is where the optic nerve fibers from both eyes cross over. When there's pressure on the chiasm, it can lead to loss of peripheral vision on both sides (bi-temporal hemianopia). This is commonly seen in cases of pituitary tumors.

01. Loss of parasympathetic innervation to pupil constrictor causes dilated pupil.
Loss of innervation to levator palpebrae superioris causes ptosis.
Gaze is "down & out"

09. Facial nerve palsy can lead to incomplete eyelid closure, which can result in corneal exposure and dryness. Tarsorrhaphy helps protect the cornea by partially sewing the eyelids together, allowing the eye to remain moist and preventing damage.

02. Third cranial nerve palsy, also known as oculomotor nerve palsy, affects the nerve responsible for the movements of several eye muscles. This condition can cause a droopy eyelid (ptosis) and double vision (diplopia) when the affected eye tries to look upward. The very severe headache might be a secondary symptom, possibly due to the increased intracranial pressure.
Fifth cranial nerve palsy (Option a) would cause sensory deficits in the face, not ptosis and double vision. Fourth cranial nerve palsy (Option b) would cause vertical diplopia when looking down, not up. Sixth cranial nerve palsy (Option c) would cause horizontal diplopia, not double vision when lifting the eyelid. Seventh cranial nerve palsy (Option c) would cause facial weakness and difficulty in closing the eye, not ptosis and double vision.

03. The sudden onset of ptosis (drooping of the upper eyelid), limited adduction and elevation of the right eye, normal pupillary function, and no other neurological deficits suggest an isolated third nerve (oculomotor nerve) palsy. This condition can be seen in diabetic patients due to microvascular ischemia affecting the nerve. The oculomotor nerve also controls the muscles responsible for constriction (constriction of the pupil) and accommodation

(focusing on near objects), so damage to the nerve can sometimes affect pupillary responses. Since there are no pupillary abnormalities in this case, it indicates that the damage is likely isolated to the oculomotor nerve.

05. Diplopia when looking to opposite to the lesion. Patients tilt their head opposite the lesion to compensate. Diplopia when reading & walking down the stairs. The trochlear nerve controls the superior oblique muscle, which is responsible for the downward and inward movement of the eye. A fourth nerve palsy can lead to difficulty in depressing the affected eye, resulting in hypertropia and vertical diplopia (double vision). Head tilt is often seen as the patient tries to minimize diplopia. Normal visual acuity and pupils help differentiate trochlear nerve palsy from other cranial nerve issues that might affect visual function or pupillary responses.

07. The presence of diplopia (double vision) in primary position, ptosis (drooping of the upper eyelid), and the eye being deviated in a downward and outward direction (inferolateral deviation) are consistent with a third nerve (oculomotor nerve) palsy. The oculomotor nerve controls the movement of several eye muscles, including the superior rectus, inferior rectus, and inferior oblique muscles, as well as the levator palpebrae superioris muscle responsible for eyelid elevation. Dysfunction of the oculomotor nerve can lead to these specific symptoms.

11. PAPPILEDEMA

01. Postural headache following a lumbar puncture can indicate cerebrospinal fluid (CSF) leak, which leads to reduced CSF pressure around the brain and can cause the brain to shift downward (coning). The downward herniation of the brain can put pressure on cranial nerves, resulting in neurological deficits like the left 6th nerve palsy, leading to the failure of abduction of the left eye.

02. The patient's history of papilloedema, lumbar puncture, postural headache, and development of left 6th nerve palsy are indicative of increased intracranial pressure. The term "coning" refers to the downward displacement of the brainstem due to increased pressure within the skull. This pressure can compress the nerves and structures in the brainstem, including the sixth cranial nerve (abducens nerve), resulting in palsy of the corresponding eye muscle and causing abduction failure.

03. Papilloedema is the swelling of the optic disc due to increased intracranial pressure. When there is elevated pressure within the skull, it can be transmitted to the subarachnoid space around the optic nerve. This leads to swelling of the optic disc, resulting in papilloedema.

04. A pituitary tumor, especially when it grows large enough to compress the optic chiasm, can lead to a visual field defect known as bitemporal hemianopia. The optic chiasm is the crossing point of the optic nerves, and when a tumor compresses it, it affects the nasal (medial) fibers of both optic nerves, resulting in loss of vision in the outer (temporal) half of the visual field in both eyes.

Options A, B, and E all describe homonymous visual field defects, which occur when there is damage to one side of the optic tract or visual pathway, leading to loss of the same side of the visual field in both eyes. Homonymous hemianopia (Option A) refers to loss of half of the visual field in both eyes, homonymous upper quadrantopia (Option B) refers to loss of the upper quarter of the visual field in both eyes, and homonymous lower quadrantopia (Option E) refers to loss of the lower quarter of the visual field in both eyes.

Cortical blindness (Option D) refers to blindness due to damage to the visual cortex in the brain. It is not related to a pituitary tumor causing bitemporal hemianopia.

12. OPTIC NEUROOPHTHALMOLOGY

1. The patient, a 62-year-old hypertensive man with a high BMI, presented with sudden decrease in vision in the right eye. He also has a history of snoring during sleep, indicating potential sleep apnea. His visual acuity is significantly reduced in the right eye

(6/36) compared to the left eye (6/6), and it does not improve with a pinhole. He has a Right Relative Afferent Pupillary Defect (RAPD), which suggests optic nerve dysfunction. Additionally, he has an Altitudinal Visual Field Defect, indicating a loss of vision in a specific vertical section of the visual field.

These findings are typical of Anterior Ischaemic Optic Neuropathy, which is a condition characterized by decreased blood flow to the optic nerve, leading to optic nerve damage and sudden vision loss.

Hypertension and high BMI are potential risk factors for this condition.

02. Ethambutol is associated with ocular toxicity, particularly affecting the optic nerve, which can result in visual disturbances and color vision deficits.

- ISONIAZID(INH)

I= iron accumulation in mitochondriasideroblastic anemia

N= Neuritis (peripheral)

H= Hepatitis

E for ETHAMBUTOL, E for EYES= Decreased visual acuity, Red- green discrimination, optic neuritis

pYRAZinamide---URIC acid----pURICinamide---Hyperuricemia (gout)

R for Rifampin, R for red-orange metabolites

03 . A. Anterior ischemic optic neuropathy

Anterior ischemic optic neuropathy typically presents as sudden painless vision loss, often described as a "curtain falling over the eye." Optic neuritis, on the other hand, usually presents with acute, painful vision loss. Anterior ischemic optic neuropathy is often associated with systemic conditions like hypertension, diabetes, and hyperlipidemia. Optic neuritis is frequently linked to autoimmune diseases such as multiple sclerosis. Papilledema is often associated with increased intracranial pressure (e.g., due to intracranial tumors, pseudotumor cerebri), which may lead to headaches, nausea, vomiting, and other neurological symptoms.

13. OPTIC NEURITIS

01. e. Retrobulbar Optic Neuritis

The sudden loss of vision, relative afferent papillary defect (RAPD), and defective color vision in the absence of abnormalities in the fundus are consistent with retrobulbar optic neuritis.

02. B. Optic nerve

It indicates a difference in the pupillary light reflex between the two eyes, suggesting that the optic nerve carrying the afferent signal from the affected eye to the brain is compromised. RAPD is often tested using the swinging flashlight test and can help in identifying optic nerve-related issues, such as optic neuropathy or severe retinal disorders.

03. C. Optic neuritis

The acute history of mild pain on eye movements, blurring of vision, presence of a central scotoma, and a swollen optic disc (papillitis) in the right eye are all suggestive of optic neuritis. Optic neuritis is often associated with demyelination of the optic nerve and can cause visual symptoms and disc swelling. It's commonly seen in conditions like multiple sclerosis.

04. D. Retrobulbar optic neuritis

The sudden loss of vision, relative afferent papillary defect (RAPD), and defective color vision in the absence of abnormalities in the fundus are consistent with retrobulbar optic neuritis. This condition involves inflammation of the optic nerve behind the eyeball and can result in visual loss, often accompanied by pain on eye movement. It's commonly associated with conditions like multiple sclerosis.

05. a. Optic Neuritis Right Eye.

Given the clinical presentation of right hemianopia with normal visual acuity and no RAPD, the most likely location of the lesion is in the left optic tract or the left visual pathway after the optic chiasm. This would exclude the possibility of optic neuritis in the right eye (option a), which would affect the optic nerve, leading to visual loss and an RAPD.

Options c, b, d, and e are possible locations for the lesion resulting in right hemianopia and are more consistent with the given clinical findings. Therefore,

option a, optic neuritis in the right eye, is the most unlikely diagnosis in this case.

06. e. Right Retrobulbar Optic Neuritis

It often presents with the following symptoms:

1. Sudden, painless loss of vision in one eye
2. Blurred vision or decreased visual acuity
3. Defective color vision, particularly affecting red-green discrimination, can occur.
4. Patients might have difficulty distinguishing objects in low-contrast situations.
5. A central blind spot or scotoma
6. Pain or discomfort when moving the affected eye.
7. An RAPD is often present, where the pupil of the affected eye responds less to light compared to the normal eye when both are tested alternately.
8. The optic nerve head might appear normal on direct ophthalmoscopy, which distinguishes retrobulbar optic neuritis from papillitis where disc swelling is observed.

Central retinal artery occlusion and central retinal vein occlusion are unlikely in this case, as there are no visible changes in the retina on ophthalmoscopy and the patient's symptoms do not match the sudden, profound loss of vision typically associated with these conditions. Macular edema is associated with swelling of the macula and could cause vision loss, but it is unlikely to present with pain on eye movements and a normal appearing retina on ophthalmoscopy. Non-arteritic anterior ischemic optic neuropathy (NAION) often occurs in older individuals and is more commonly associated with visual loss on awakening without significant pain.

14. SYMPATHETIC OPHTHALMITIS

1. e. Sympathetic Ophthalmia.

Sympathetic Ophthalmia is a rare but serious condition that can occur after trauma to one eye, leading to inflammation in both eyes. In this case, the patient sustained trauma to the right eye with a metal rod, resulting in corneal rupture and iris prolapse. During surgery, the iris was excised, and the corneal wound was repaired. Symptoms of sympathetic ophthalmia typically develop weeks to months after the initial injury or surgery. The patient in this scenario presents with pain, photophobia, inflammatory cells in the anterior chamber and vitreous, choroidal nodules, and deposits of inflammatory cells on corneal epithelium. The presence of these signs and symptoms is consistent with the diagnosis of sympathetic ophthalmia. Conjunctivitis and keratitis are conditions that can cause eye redness and irritation but do not typically present with the combination of symptoms and findings mentioned in the case. Low tension glaucoma and scleritis are also unlikely in this case, as the patient's intraocular pressure is reported as normal, and the clinical features are more indicative of sympathetic ophthalmia.

15. MACULA

1. The inferior oblique muscle inserts near the macula, specifically onto the sclera close to the posterior pole of the eye

02. Age-related macular degeneration is a common eye condition that affects the macula, the central part of the retina responsible for sharp, detailed vision. As people age, the macula can deteriorate, leading to vision problems, such as blurred or distorted vision. In advanced stages, blank patches or areas of reduced vision can occur.

Options a, c, d, and e are less likely to cause the specific symptoms described in the scenario. Acute angle-closure glaucoma (Option a) typically presents with sudden, severe eye pain, blurred vision, and halos around lights. Anterior ischemic optic neuropathy (Option c) usually causes sudden painless loss of vision, often in one eye. Cataract (Option d) is a clouding of the lens of the eye and can cause overall blurring of vision, but it does not typically lead to the specific distortion and blank patches described. Central retinal artery occlusion (Option e) results in sudden, painless loss of vision in one eye.

03. The investigation that isn't appropriate in this case is e. Ocular Coherence Tomography (OCT) of Macula.

The clinical presentation with decreased vision, left Relative Afferent Pupillary Defect, and Bitemporal Hemianopia in a 30-year-old hospital worker raises suspicion for a possible pituitary tumor compressing the optic chiasm. Given these symptoms and signs, the investigation of choice should be c. MRI of Pituitary.

MRI of the pituitary is the most appropriate imaging study to evaluate the pituitary gland and the optic chiasm, and it can help identify any abnormalities, such as pituitary tumors or other lesions causing the visual field defects.

Ocular Coherence Tomography (OCT) of the Macula is not relevant in this case, as the macula appears clinically normal, and the visual field defects and relative afferent pupillary defect indicate a more significant issue related to the optic nerve and optic chiasm. The priority should be to investigate the cause of the visual field defects and optic disc pallor, which is better addressed with an MRI of the Pituitary.

04. Macular degeneration is a common cause of declining vision, especially in the elderly population. The condition affects the macula, the central part of the retina responsible for sharp central vision. As the disease progresses, the margins of the fundus may become obscured, leading to a loss of central vision. Hypertensive retinopathy, diabetic background retinopathy, and proliferative diabetic retinopathy are other possible causes of vision problems, but the given symptoms of obscured fundus margins are more indicative of macular degeneration in this case. Multiple sclerosis does not directly cause obscured fundus margins.

05. A. Macular degeneration.

Drusen and yellow spots in the center of the retina are characteristic findings of age-related macular degeneration (AMD). AMD is a common eye condition that affects the macula, leading to central vision loss. The presence of drusen (small, yellow deposits) and yellow spots in the center of the retina are classic signs of this condition. Hypertensive retinopathy, diabetic background retinopathy, and proliferative diabetic retinopathy are conditions associated with hypertension and diabetes, respectively, but they do not typically present with drusen and yellow spots in the retina.

Multiple sclerosis is a neurological disorder and is not associated with the presence of drusen or yellow spots in the retina.

THE END

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EYE-04

LENS/ CATARACT

1. LENS

1. Refractive index of lens is increased in?
a. Anterior subcapsular cataract b. Cortical cataract
c. Morgagnion d. Nuclear cataract
e. Posterior subcapsular cataract

2. An otherwise fit 20 years old man sustains blunt trauma the left eye with a large plank of wood. On examination of the eye his visual acuities are 6/6 and 6/60 Right and left eyes respectively. The visual acuity in RAPD in this patient:
a. Optic Neuropathy
b. Retinal Detachment
c. Retinal Oedema (more than 2 retinal quadrants)
d. Sub Retinal Haemorrhage (extensive)
e. Subluxated Lens

3. A 35 years female presents to the OPD with dimness of vision to the right eye for one year. She gives history of right cataract extraction but record is not available clinically visual acuity in right eye is CF2m & 6/6 in left eye. There is now right aphakia with intact posterior capsule. What is the most appropriate method for restoration of vision in right eye?
a. Spectacles
b. Contact lenses
c. Right secondary posterior chamber 10L implantation
d. Right secondary anterior chamber IOL implantation
e. Refractive surgery

4. Dislocation of lens can occur because of:
a. Retinal detachment b. Blunt trauma
c. Whooping cough d. Posterior scleritis
e. Vitreous haemmorhage

5. The crystalline lens derives its nourishment from:
a. Aqueous and vitreous b. Blood vessels
c. Cornea d. Connective tissue
e. Zonules

6. The power of the intra-ocular lens varies depending upon:
a. Age of patient b. Amount of Visual loss.
c. Axial length. d. Nuclear hardness.
e. Type of Cataract

7. The most common cause of blindness in the world is:
a. Cataract b. Diabetic Retinopathy
c. Glaucoma d. Refractive errors
e. Trachoma

8. The test used to calculate the power of intraocular lens prior to cataract surgery.
a. B/Scan b. Biometry
c. FFA d. HRT
e. OCT

9. The best treatment for Aphakia is:
a. Anterior chamber IOL b. Contact lens
c. Excimer laser d. Posterior chamber IOL
e. Spectacles

10. An otherwise fit 20 years old man sustains blunt trauma to the left eye with a large plank of wood. On examination of the eye his visual acuities are 6/6 and 6/60 Right and left eyes respectively. The visual acuity in the left eye does not improve with Pin hole and he has a Left Relative Pupollary Defect. All except one can cause RAPD in this patient:
a. Optic Neuropathy
b. Retinal Detachment
c. Retinal Oedema (more than 2 retinal quadrants)
d. Sub Retinal Haemorrhage (extensive)
e. Subluxated lens.

1.D	2.E	3.D	4.B	5.A
6.A	7.C	8.B	9.D	10.E

11. Calculation of IOL power is called.

a. Biometry
b. Keratometry
c. Ophthalmometry
d. Pachmetry
e. Tonometry

12. Aphakia can be corrected by following Except:

a. Spectacles
b. Contact lenses
c. Intraocular lenses
d. Epikeratophakia
e. Radial keratotomy

13. The antero-posterior diameter of a 40 years old lens is:

a. 2 to 3 mm
b. 3 to 4 mm
c. 4 to 5 mm
d. 5 to 6 mm
e. 6 to 7 mm

11.A	12.E	13.C

2. CATARACT

1. Best option for treating a unilateral cataract in a young adult with unaided visual acuity of 6/6 in the other eye:

a. Cataract surgery and correction with glasses
b. Cataract surgery and correction with contact lens
c. Epikeratophakia
d. Phacoemulsification and IOL implantation
e. Cataract surgery as such

2. A young girl presents with history of difficulty in reading and focusing objects at different distance. She fells this problem more in her right eye. She also gives history of some viral illness few weeks back. On reflex in right eye but very slow near reflex is present. What is your provisional diagnosis?

a. Horner syndrome
b. Argyll Robertson pupil
c. Marcus Gunn pupil
d. Adie pupil
e. Right Physiological anisocoria

3. A 25 years old lady doctor has bilateral Uveitis secondary to Sarcoidosis. She was started on high dose steroid therapy in 2005. Inspite of treatment she started to lose sight in both eyes. In 2011 her Visual acuities were 6/36 in both eyes with No afferent pupillary defect. On distant direct Ophthalmoscopy there are bilateral media opacities that remain stationary on Ocular movements. The most likely diagnosis is:

a. Age related cataracts
b. Corneal Opacities
c. Secondary Cataracts
d. Retinal Detachment
e. Vitreous Opacities

4. In present days, the surgery for cataract extraction is indicated when?

a. Patient's age is less than 50 years
b. Patient's age is more than 50 years.
c. When cataract reaches stage of maturity
d. When patient's vision is worse than 6/18
e. Daily activities of patient are disturbed

5. A young boy of 30 years age while working in the factory suffered an Electric shook to his hands. He survived. What could be the most possible effect on his eyes;

a. Bilateral Cataracts
b. Bilateral Dry eyes
c. Bilateral Macular edema
d. Bilateral Open angle glaucoma
e. Bilateral Retinal detachment

6. The retina in case of dense cataract can be assessed best by:

a. B-Scan
b. CT Scan orbit.
c. FFA
d. MRI Scan
e. Retinoscope

7. Major cause of world blindness

a. Cataract
b. Diabetic retinopathy
c. Glaucoma
d. Onchocerciasis
e. Trachoma

8. Following Laser is used for posterior capsulotomy in posterior capsular opacification;

a. Argon laser
b. Carbon dioxide laser
c. Diode laser
d. Excimer laser
e. YAG laser

9. Phakolytic glaucoma is best treated by:

a. Cataract extraction
b. Cyclo-destructive procedure
c. Diode laser Cycloablation
d. Fistulizing operation
e. Miotics and Beta blockers

10. The etiology of complicated cataract all, except:
a. Disciform keratitis b. Iridocyclitis
c. Retinitis pigmentosa d. Retinal detachment
e. Scleritis

11. The commonest cause of cataract is:
a. Diabetes b. Hypo-parathyroidism
c. Old age d. TORCH infections e. Trauma

12. Symptoms of cataract include all of the following except:
a. Color vision defects
b. Decreased vision in bright light
c. Decreased vision in low illumination
d. Glare e. Halos

13. The commonest cause of cataract is:
a. Diabetes b. Hypo-parathyroidism
c. Old age d. TORCH infections
e. Trauma

14. Phaco-Emulsification is done except in:
a. Dislocated cataract b. Hyper-mature cataract
c. Immature cataract d. Mature cataract
e. Morgagnian cataract

15. Symptoms of cataract include all of the following except:
a. Color vision defects
b. Decreased vision in bright light
c. Decreased vision in low illumination
d. Glare e. Halos

16. The most common cause of reduced vision in the world is:
a. Cataract b. Diabetic retinopathy
c. Glaucoma d. Refractive errors e. Trachoma

17. A young patient presented with Rosette shaped cataract which is characteristic of:
a. Complicated cataract b. Diabetic cataract
c. Radiation induced cataract d. Senile cataract
e. Traumatic cataract

18. A patient who was operated for cataract four months back comes to you with foggy vision. On examination there was posterior capsular thickening, which mode of treatment is most useful?
a. Argon laser b. Diode laser
c. Excimer laser d. Krypton laser
e. YAG-Laser

19. In cataract surgery, the ideal placement of IOL is:
a. In anterior chamber b. In iris plane
c. In sulcus plane d. In capsular bag
e. Scleral fixation

20. Commonly inherited opacities which are ill defined and do not lie in visual axis
a. Sub capsular cataract b. Discoid cataract
c. Posterior capsular cataract d. Polar cataract

21. Commonly inherited opacities which are well localized and lie in visual axis:
a. Sub capsular cataract b. Discoid cataract
c. Posterior capsular cataract d. Polar cataract

22. Tiny bluish white opaque spots scattered all over the lens:
a. Subcapsular cataract b. Discoid cataract
c. Coronary cataract d. Posterior capsular cataract
e. Cataracta coerulea

23. Which of the following is formed due to persistence of the posterior part of the vascular sheath of the lens?
a. Subscapsular cataract b. Discoid cataract
c. Coronary cataract d. Posterior capsular cataract
e. Sutural cataract

24. Club shaped opacities arranged like a crown in the peripheral part of cortex:
a. Subcapsular cataract b. Discoid cataract
c. Coronary cataract d. Posterior capsular cataract
e. Sutural cataract

25. This type of cataract is due to delayed formation of anterior chamber and so opacity is congenital:
a. Sub Capsular cataract b. Discoid cataract
c. Coronary cataract d. Posterior capsular cataract
e. Polar cataract

1.D	2.D	3.C	4.E	5.A
6.A	7.A	8.E	9.A	10.C
11.C	12.A	13.C	14.A	15.A
16.D	17.E	18.E	19.D	20.B
21.E	22.E	23.D	24.C	25.E

3. EXTRACAPSULAR CATARACT

1. The only disadvantage of extra capsular cataract excision over intra capsular cataract excision is because:

a. Vitreous loss doesn't occur
b. Retinal detachment is more common
c. Posterior capsule gets opacified
d. We cannot implant anterior chamber intra ocular lens (IOL)
e. Intra capsular cataract excision is the more advanced technique

KEY:C

4. CONGENITAL CATARACT

1. During the 1st trimester of pregnancy, the following can be a cause of congenital cataract in the baby:

a. Abdominal and pelvic ultrasonography of mother
b. Abdominal and pelvic MRI of the mother.
c. Use of transfusion to the mother
d. Rubella infection of the mother.
e. Blood transfusion to the mother.

2. One year old boy is brought to the OPD, by his parents. Doctor diagnosed him as having congenital cataracts. What will happen if his cataract are not removed at the earliest?

a. He will develop Lens induced Glaucoma
b. He will develop retinoblastoma
c. He will develop Amblyopia
d. He will develop Pthysis Bulbi
e. Retinal Detachment

3. A 4 years old child is brought by her mother with bilateral white pupils. Anterior segment and pupillary reactions are normal. Ultrasound B-scan was performed and was found to be normal. Most probable diagnosis is?

a. Bilateral congenital cataracts
b. Bilateral retinoblastoma
c. Congenital glaucoma
d. Corneal dystrophies
e. Primary Hyperplastic Vitreous

4. A 4 years old child is brought by her mother with bilateral white pupils. Anterior segment and pupillary reactions are normal. Ultrasound B-scan was performed and was found to be normal. Most probable diagnosis is?

a. Bilateral congenital cataracts
b. Bilateral retinoblastoma
c. Congenital glaucoma
d. Corneal dystrophies
e. Primary Hyperplastic Vitreous

1.D	2.C	3.A	4.A

5. NUCLEAR SCLEROSING CATARACT

1. A 70 years old gentleman who is otherwise fit presents to Eye OPD with progressive decrease in vision for last 2 years. His Visual acuities were recorded as 6/24 both eyes and improved to 6/9 with pin hole. He was previously emmetropic but now his refractive error is -2.0 diopter in each eye. The pupillary responses, intra ocular pressures are normal. On distant direct ophthalmoscopy there is a media opacity which does not move with the movement of the eye. The most likely diagnosis is:

a. Asteroid Hyalosis
b. Corneal Opacitye.
c. Nuclear Sclerosis Cataract
d. Posterior Vitreous Detachment
e. Vitreous Hemorrhage

2. A 70 year old gentleman has increasing difficulty with his vision while driving but has found that he can read the newspaper without his reading glasses. He has been Emmetropic all his life but his latest refraction is – 2.0 Dioptre sphere in each eye which corrects his vision to 6/9 both eye. One of the following is the probable cause of his acquired myopia:

a. Corneal Opacity
b. Cortical Cataract
c. Nuclear Sclerotic Cataract
d. Posterior Sub capsular Cataract
e. Central Serous Retinopathy

3. A 70 years old gentleman who is otherwise fit presents to Eye OPD with progressive decrease in vision for last 2 years. His Visual acuities were recorded as 6/24 both eyes and improved to 6/9 with pin hole. He was previously emmetropic but now his refractive error is -2.0 diopter in each eye. The pupillary responses, intra ocular pressures are normal. On distant direct ophthalmoscopy there is a media opacity which does not move with the movement of the eye. The most likely diagnosis is:

a. Asteroid Hyalosis
b. Corneal Opacitye.
c. Nuclear Sclerosis Cataract
d. Posterior Vitreous Detachment
e. Vitreous Hemorrhage

4. 30. A 60 years old lady presents with painless decrease in vision in the left eye. The Visual acuities are 6/6 Right and 6/60 in the left. The visual acuity does not improve with pin hole. She also has a left RAPD. All of the following diseases CAN be a cause of RAPD except:

a. Compressive Optic Neuropathy
b. Nuclear Sclerotic Cataract
c. End stage Glaucoma
d. Ischaemic Optic Neuropathy
e. Retinal Detachment

1.C	2.C	3.C	4.B

6. ENDOPHTALMITIS

1. A small child is hit in the eye by a used disposable syringe by his younger brother 02 days back. He is brought by his parents to the OPD with painful red eye. His eyelids are swollen. There is ciliary congestion, hazy cornea and hypopyon. Pupil is yellowish white and there is no fundus reflex. What is your diagnosis?

a. Orbital cellulitis
b. Corneal ulcer
c. Traumatic uveitis
d. Endophthalmitis
e. Posterior uveitis

2. Which of the following is most important factor in the prevention of the endophthalmitis in cataract surgery?

a. One-week antibiotic therapy prior to surgery
b. Preoperative preparation with povidone iodine
c. Trimming of eyelashes
d. Use of intravitreal antibiotics

3. The most dreadful complication of cataract surgery on the 1st post operative day is:

a. Striate keratitis
b. Endophthalmitis
c. Iris Prolapse
d. Hyphaema
e. Cystoid macular edema

1.D	2.B	3.B

HINTS AND EXPLANATION

1. LENS

1. Nuclear cataract affects the density of crystalline lens nucleus with an lending to increase in refractive index.
2. RAPD is caused by optic nerve lesion or severe retinal disease. Other options involve either of them except subluxated lens
3. IOC implantation is modern method of choice for correction of aptakin.
4. Other options are inconsistent with the causes of dislocation of lens except for blunt trauma which is one of the causes of acquired lens displacement.
5. As lens is placed between aqueous and vitreous humor so derives it's nourishment from here.
6. IOL power depends upon axial length of lens and sorneal curvature .
8. Biometry is used to calculate lense power.
9. Posterior chamber IOL is best treatment option for aphakia because of low complicationa profile.
12. Redial keratotomy us surgical procedure for correction of myopia.

2. CATARACT

1. Phacoemulcificstion is the most common method of cataract extraction followed by IOL implantation because of its advantages like small incision easily visual rehabilitation less astigmatism.
3. steroids use is one of the causes of secondary cataract.
5. Electric shock being radiation lead to cataract.

6. B scan is used for assessing posterior segment of eye.

8. YAG laser capsulotomy is indicated for treatment of opacification of the posterior capsule resulting in decreased visual acuity or visual function.

9. Phacolytic glaucoma is caused by inflammation resulting from leakage of lens material through capsule of nature lens so it's treatment cataraicl extraction.

10. Disciform Keratins is endothelitic leading to both stomal and epithelial edema of cornea. It's role in causing secondary/complicated cataract is not implicated yet.

11. Senile Cataract (old age cataract) is more common than acquired cataract.

13. Old age is most common cause of cataract

16. Most common cause of reduced vision is refractive errors most common cause of blindness is cataract.

17. Rosette shaped cataract is due to contusion injury (automatic cataract)

18. YAG laser is used for posterior capsulotomy in treatment of posterior capsule opacification.

22. Cerulum Cataract is also called blue dot cataract characterized by blue and white opacification in nucleus of lens.

EXTRACAPSULAR CATARACT

1. ECCE 's disadvantage/complication is posterior capsule opacification.

CONGENITAL CATARACT

1. Rubella infection is one of the most common causes of congenital cataract.

2. Congenital cataract is one of the causes of amblyopia.

3. As anterior segment and pupillary reactions are normal moreover B scan is also normal excluding diseases of posterior segment .so the only left option which is correct is bilateral congenital cataract.

NUCLEAR SCLEROSING CATARACT

1. In old patient there is decreased vision of isn't corrected with Lenser so it is mostly due to cataract

4. Causes of RAPD include diseases involving retina or optic nerve so cataraicl isn't including in causes RAPD while other options do.

EYE-05

GLAUCOMA

1.GLAUCOMA

1. APPLIED ANATOMY AND PHYSIOLOGY

1. Regarding Aqueous Humor, which statement is NOT True?

a. ATP is required for its production
b. Is produced by the non-pigmented epithelium of the ciliary body.
c. Levels lactate is higher than the plasma
d. Proteins content is more than 2%
e. It is IOP dependent

2. Regarding the angle of the Anterior Chamber which statement is NOT True?

a. The angle is bounded anteriorly by the Schwalbe's Line and posteriorly by Ciliary body.
b. The angle is not visible to the naked eye because of total internal reflection.
c. Pseudo exfoliation causes closure of the anterior chamber angle
d. Pigmentary glaucoma is open angle
e. Plateau Iris cause angle closure

1. D	2. C

2. GLAUCOMA CLASSIFICATION

1. Neovascular glaucoma is common in:

a. Ischaemic central retinal vein occlusion
b. Vitreous hemorrage c. Hypermature cataract
d. Subluxated lens e. Hyphaema

2. In congenital glaucoma with buphthalmos, besides intraocular pressure and disc, we check the following for diagnosis and progress of disease:

a. Corneal diameter b. Bisual fields
c. Electroretingogram d. Palpebral fissure
e. B-Scan of the eye

3. A baby age one month is brought to an eye clinic with findings of haziness and larger corneal size noted on both sides. What do you think is the probable diagnosis in this infant?

a. Congenital cataracts
b. Congenital glaucoma (Bupgthalmos)
c. Congenital rubella infection
d. Megalocornea
e. Birth trauma to comes

4. A 75 year old boy with vernal keratoconjunctivitis presents with gradual lose of vision in both of hi. eyes. He gives history of use of topical dexamethasone eye drops for many years. On examination, his visual acuity in right eye wa. 12 and left eye was 6/60. Both corneas were clear. His intraocular pressure was, 24mm Hg in right eye and 30 mm Hg in left eye. Fundoscopy cup disc ratio was 0.5 in right eye and 0.8 in left eye. What is the probable diagnosis of his visual loss?

a. Keratoconus b. Steroids induced Glaucoma
c. Optic Atrophy d. Congenital Glaucoma
e. Keraoglobus

5. A 60 years old gentleman comes to you because he cannot see clearly for distance. His present reading glasses are 5 years old. He is otherwise fit. His visual acuities 6/5 in both eyes corrected with glasses. His refractive error is – 2 diopter spheres in both eyes. On examination his pupillary response is normal. Anterior segment examination is normal with deep anterior chambers. His intra ocular pressures were recorded as 28 and 30 mm Hg in right and left eye respectively. His central corneal thickness is 515 microns in each eye. On direct

ophthalmoscopy he has got a cupping of 0.6 in both eyes with nerve fiber layer haemorrhage along the superior margin of the left optic disc. Visual field examination shows arcuate scotoma in both eyes. The most likely diagnosis is?

a. Myopic degeneration of the retina
b. Ocular hypertension
c. Primary open angle glaucoma
d. Pscudoexfolitive glaucoma
e. Secondary glaucoma

6. A 50 years old diabetic lady with uncontrolled Type I diabetes and hypertension for the last 15 years presents with pain in the right eye. Visual acuities are counting finger in the right and 6/18 in the left eye. She has a right relative afferent pupillary defect (RAPD) with slightly hay cornea on the right side. The anterior chamber is deep with dilated blood vessels visible on the right iris. The eye is hard on digital tonometry. There is reduced red reflex on distant direct ophthalmoscopy with vitreous opacities in the right eye. The most likely cause of raised Intra Ocular Pressure in the right eye is?

a. Acute angle closure glaucoma
b. Lens induced glaucoma
c. Neovascular glaucoma
d. Pigmentary glaucoma
e. Primary open angle glaucoma

7. A 40 years old hypermetropic lady presented with severe pain and redness in her left eye since yesterday. On examination her visual acuity in left eye is counting finger. The cornea is oedematous and pupil is mid-dilated. Her intraocular pressure is 60mm Hg. On slit lamp examination her lens is clear. What is the most likely diagnosis?

a. Acute angle closure glaucoma
b. Lens induced glaucoma
c. Neovascular glaucoma
d. Pigmentary glaucoma
e. Primary open angle glaucoma

9. A 75 years old male has a right mature cataract for the last 2 years. He refused to undergo cataract surgery. One day ago he developed severe pain in Right eye and head ache. On examination, he has perception of light in Right Eye, corneal edema, milky white fluid in the anterior chamber and IOP of 60mm Hg. What is the diagnosis?

a. Acute angle closure glaucoma
b. Lens induced glaucoma
c. Neovascular glaucoma
d. Pigmentary glaucoma
e. Primary open angle glaucoma

3. A 30 years old man presents with the history of headache and vomiting for the last few weeks. He also gives history of transient loss of vision once of twice a day. O/E his VA is 6/6 in both of his eyes, pupil are reacting normal to light. His IOP is 14mm Hg in both of his eye. His optic discs are swollen in both of his eyes. What is your provisional diagnosis in this case?

a. Optic neuritis
b. Retinal migraine
c. Thrombi embolic phenomenon in retinal arteries.
d. Raised Intra cranial pressure.
e. Cavernous sinus thrombosis

10. Attacks of Acute angle closure Glaucoma can be easily precipitated in a person with narrow angle by:

a. Throwing bright light into his eye
b. Putting pilocarpine drops in his eyes
c. Putting steroid drops in his eyes
d. Putting mydriatic drops in his eyes
e. Making him sleep in a dark room

11. The differential diagnosis of congenital Glaucoma include all except;

a. Congenital Blocked Nasolacrimal duct
b. Keratitis
c. Megalocornea
d. Norrie's disease
e. Persistent Hyperplastic Primary Vitreous

1.A	2.A	3.B	4.B	5.C	6.C
7.A	8.B	9.D	10.D	11.D	---

12. Following is the diagnostic sing of Congenital Glaucoma Except;

a. Corneal Edema
b. Enlarge cornea
c. Haab's Striae
d. Stocker line
e. Raised IOP

13. Regarding the risk factors of glaucoma, which statement is NOT true:

a. Age
b. Diabetes
c. Family History
d. Race
e. Smoking

14. A 75 years old male has a right mature cataract for the last 2 years. He refused to undergo cataract surgery. One day ago he developed severe pain in Right eye and head ache. On examination, he has perception of light in Right Eye, corneal edema, milky white fluid in the anterior chamber and IOP of 60mm Hg. What is the diagnosis?

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c. Neovascular glaucoma
d. Pigmentary glaucoma
e. Primary open angle glaucoma

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a. Acute angle closure glaucoma
b. Lens induced glaucoma
c. Neovascular glaucoma
d. Pigmentary glaucoma
e. Primary open angle glaucoma

16. A 60 years old gentleman comes to you because he cannot see clearly for distance. His present reading glasses are 5 years old. He is otherwise fit. His visual acuities 6/5 in both eyes corrected with glasses. His refractive error is – 2 diopter spheres in both eyes. On examination his pupillary response is normal. Anterior segment examination is normal with deep anterior chambers. His intra ocular pressures were recorded as 28 and 30 mm Hg in right and left eye respectively. His central corneal thickness is 515 microns in each eye. On direct ophthalmoscopy he has got a cupping of 0.6 in both eyes with nerve fiber layer haemorrhage along the superior margin of the left optic disc. Visual field examination shows arcuate scotoma in both eyes. The most likely diagnosis is?

a. Acute angle closure glaucoma
b. Lens induced glaucoma
c. Neovascular glaucoma
d. Pigmentary glaucoma
e. Primary open angle glaucoma

17. The earliest visual field defect in POAG is

a. Arcuate scotoma
b. Bjerrums scotoma
c. Central scotoma
d. Centro-cecal scotoma
e. Isolated paracentral nasal scotoma

18. Lens induced glaucoma least possibly will occur in:-

a. Anterior lens dislocation
b. Hypermature cataract
c. Intumescent cataract
d. Posterior lens dislocation
e. Posterior sub-capsular cataract

19. A 50 years male presents with progressive loss of peripheral vision and has recently also noticed increasing watering from both his eyes, more so after working in dim light. What is the most appropriate diagnosis?

a. Ectropion
b. Refractive error
c. Entropion
d. Keratitis
e. Closed angle glaucoma

12.D	13.E	14.B	15.C
16.C	17.E	18.E	19.E

20. A 30 years old male complaints of gradual loss of vision particularly peripheral fields and also complains of dull pain in the both eyes. What is the most likely diagnosis?

a. Closed angle glaucoma
b. Central retinal vein occlusion
c. Central retinal artery occlusion
d. Cataract
e. Hypermetropia

21. A patient with sudden severe eye pain, red eye, visual blurring, acuity of only finger counting, nausea, vomiting with a shallow ant chamber that is hazy on shining a torch. What is the diagnosis?

a. Central retinal Vein Occlusion
b. Acute closed angle glaucoma
c. Uveitis
d. Iritis
e. Open angle glaucoma

22. A 50 years old male presents with complaints of blurred vision, night haloes and red eye for last 1 hour after coming out of movie theater. On examination, his cornea is hazy and pupils are fixed and dilated. What is the most likely diagnosis?

a. Closed angle glaucoma
b. Acute iritis
c. Conjunctivitis
d. Subconjunctival hemorrage
e. Episcleritis

20.A	21.B	22.A

3. GLAUCOMATOUS VISUAL FIELD DEFECTS

1. The earliest visual field defect in POAG is:

a. Arcuate scotoma
b. Bjerrum's scotoma
c. Central Scotoma
d. Paracentral scotoma
e. Ring scotoma

2. A patient has a temporary loss of vision, like a curtain descending in front of eye. What is the most likely diagnosis?

a. Amaurosis fugax
b. Papillocedema
c. Ischemic optic neuropathy
d. Central retinal artery occlusion
e. Central retral retinal vein occlusion

1.D	2.A

4. MANAGEMENT OPTIONS GLAUCOMA

1. In phacoytic glaucoma, the treatment of choice is to control the pressure and then:

a. Do cataract surgery
b. Do trabeculectomy
c. Continue with antiglaucoma medicine and monitor the patient.
d. Give the patient immunosuppressive drugs
e. Do yag laser Iridectomy

2. Trabeculectomy is done for:

a. Retinal detachment
b. Vitreous hemorrhage
c. Glaucoma
d. Ptosis
e. Aphakia

3. While treating glaucoma patient who is having asthma, which of the following drug is contra-indicated?

a. Beta-blocker
b. Dorzolomide
c. Mannitol
d. Pilocarpine
e. Prostaglandin analogue

4. The following antiglaucoma drug is contraindicated in a patient with bronchial asthma:

a. Pilocarpine
b. Acetazolamide
c. Adrenaline
d. Beta blockers
e. I/V Mannitol 20%

5. Which of the following drugs is not used topically for treatment of open angle glaucoma:

a. Acetazolamide
b. Brimonidine
c. Betoxolol
d. Dorzolamide
e. Latanoprost

6. A man age 50-Years, presented with glaucomatous cupping of the discs and IOP of 28mm Hg in both eyes. He also grave history of using Salbutamol Inhaler. Following is not an appropriate treatment option;

a. Brimonidine
b. Dorzolamide
c. Latanoprost
d. Pilocarpine
e. Timolol

1.A	2.C	3.A	4.D	5.A	6.E

7. A 60 years old female comes to you with severs pain and visual loss in her left eye for the last 2 days. On examination there is corneal edema and shallow anterior chamber with raised IOP. She was diagnosed as acute angle closure glaucoma. What is the best treatment option?

a. Antiglaucoma, miotics and steroids.
b. Antiglaucoma, cycloplegics and steroids.
c. Antiglaucoma, miotics and steroids.
d. Antiglaucoma, and antibiotics
e. Miotics and antibiotics.

8. Following drugs have antiglaucoma effect expect

a. Dipivefrin
b. Latanorost
c. Pilocrpine
d. Timolol
e. Tropicamide

9. A 65 year old hypermetropic and diabetic lady was examined for diabetic retinopathy in the eye clinic. Her visual acuities corrected with glasses with 6/6 in both eyes. Her intra ocular pressures were recorded as 15mm Hg in each eye. She underwent pupillary dilatation and was found to have minimal background diabetic retinopathy. After 2 hours she started to complain of pain in both eyes and the Intra Ocular pressures were recorded as 50mm Hg in each eye. The most likely topical drug used to dilate the pupil and to cause this acute rise in intra ocular pressures is?

a. Betamethasone eye drops
b. Betaxolol eye drops
c. Dexamethasone eye drops
d. Pilocarpine eye drops
e. Tropicamide eye drops

10. A 60 years old lady was diagnosed with primary open angles glaucoma. She was counseled and started on topical anti glaucoma medication. She has a history of asthma as a child. 3 days after starting medication she developed shortness of breath. She does not take any other medication. Is it possible that the anti-glaucoma medications can precipitate an acute attack of asthma and if then most likely anti glaucoma drugs to cause it is?

a. Brimonidine eye drops
b. Dorzolamide eye drops
c. Latanoprost eye drops
d. Levobunolol eye drops
e. Pilocarpine eye drops

11. A 3 year old baby with complaints of watering & photophobia O/E corneal size is enlarged ratio is 0:3:1. What is the appropriate management?

a. Trabeculectomy
b. Argon laser trabeculoplasty
c. Laser peripheral iridectomy
d. Trabeculotomy
e. Photocoagulation

12. 70 years man with open angle glaucoma, uncontrolled on medical treatment. What is the appropriate management?

a. Trabeculectomy
b. Argon laser trabeculoplasty
c. Trabeculotomy
d. Photocoagulation
e. Cyclocryosurgery

13. A 40-years-old man with medically uncontrolled open angle glaucoma. What is the appropriate management?

a. Trabeculectomy
b. Argon laser trabeculoplasty
c. Trabeculotomy
d. Photocoagulation
e. Cyclocryosurgery

14. Normal eye of a 24 years old female, the other eye ball has an angle closure glaucoma. What is the appropriate management?

a. Trabeculectomy
b. Argon laser trabeculoplasty
c. Trabeculotomy
d. Laser peripheral iridectomy
e. Photocoagulation

7.A	8.E	9.E	10.D
11.D	12.B	13.B	14.C

5.GLAUCOMA

15. A 15 years old boy with joint pain, complaining of pain, redness, photophobia in both eyes. Tonometry shows raised tension in both eyes. What is the appropriate next step in the management?

a. Pilocarpine
b. Beta blockers
c. Enucleation
d. Steroids
e. Trabeculectomy

16. A 40 years old female with a painful blind eye. Patient wants to retain eye for cosmetic reasons. What is the appropriate management?

a. Trabeculectomy
b. Argon laser trabeculoplasty
c. Trabeculotomy
d. Photocoagulation
e. Cyclocryosurgery

15.B	16.C

HINTS AND EXPLANATION

1. Applied Anatomy And Physiology

1. All other options except d are correct--aqueous humour protein content is less than 1% compared to plasma--its actively secreted requires AT produced by ciliary body-contains ascorbate 30 times higher than plasma and IOP dependent.

2. Pseudo exfoliation syndrome is a systemic condition characterized by the deposition of white dandruff-like material, called exfoliation material, within the anterior segment of the eye . The deposition of this material can result in aqueous outflow and glaucoma. pseudoexfoliative glaucoma is the most common form of secondary open angle glaucoma.

2. GLAUCOMA CLASSIFICATION

1. Neovascular glaucoma is associated with iris neovascularization caused by ischemia of retina--hypoxic tissues produces VEGF -one of the common cause is ischemic central retinal vein occlusion.

2. In congenital glaucoma iop is elevated at birth --pressure is raised so we check intraocular pressure ' cornea(there is enlargement of corneal diameter' corneal edema, breaks in descement membrane--

3. This is case of congenital glaucoma / buphtalmos as age is 1 month there is haziness and enlarged corneal size typical features if congenital glaucoma-some signs and symptoms of congenital glaucoma:

- Lacrimation ‹photophobia ‹
- Corneal haze
- Enlarged eye ball like an ox eye

4. As history of patient tells the patient is chronic steroid user so it' s sterold induced glaucoma Topical and systemic steroid causes secondary glaucoma by

- supressing phagocytic activity of endothelial cells lining the trabecular meshwork
- Inhibit release of hydrolase enzymes and glycosaminoglycan can' t depolymerize in trabecular meshwork.

5. For PoAG glaucoma following are necessary: Iop>21mmhg,glaucomatous visual field defects , open and normal angles , absence of secondary causes
6. In diabetics and hypertensive patients there is neovascularization-- as mentioned dilated blood vessels on right iris so neovascular glaucoma.
7. Risk factors for acute angle closure glaucoma is hypermetropia, female gender and some of the symptoms are severe pain and redness within short duration.
8. Lens induced glaucoma occurs due to swollen cataractous lens pushes against iris.
9. It' s case of raised intracranial pressure bcz iop is normal, no visual field defects and no glaucomatous cupping.
10. Precipiting factors for angle closure glaucoma: Dim light, stress, mydriatic drops
11. All others are differentials except Norrie's disease it s x linked recessive disease affecting male --causing retinal cell dysplasia.
12. Diagnostic signs of congenital galucoma:
Corneal edema
Enlarged cornea
Haab' s striae
IOP raised
stoker line--iron deposition line in pterygium.).
13. Smoking is not risk factor for glaucoma all others are-like age ‹dibetes, race ‹family hx
14. Mature cataract causes glaucoma bcz swollen lens pushes back against iris and causes obstruction in aqueous flow --iop raised
16. Its primary open angle glaucoma bcz:
iop>21mmhg
Arcuate scotoma: glaucomatous visual field defects
Open and normal angles
Absence of any seconadary cause
17. Scotomas are Defects in field of vision--one of earliest visual field defect is Para central scotoma in glaucoma in arcuate area btw 10 and 20 degrees of fixation point.
18. Posterior subscapular catract least likely causes glaucoma because of its most posterior position irrespective of other cataracts types
19. Illumination is one of risk factor for angle closure galucoma- already there is peripheral vision loss--indicating galucoma-watering so is sign of this type.
20. Patient complaining of pain--symptom of angle closure glaucoma.
21. Signs and symptom's suggestive of close angle glaucoma(pain,red eyes ,visual blurring.

03. GLAUCOMATOUS VISUAL FIELD DEFECTS

1. Scotomas are Defects in field of vision--one of earliest visual field defect is Para central scotoma in glaucoma in arcuate area btw 10 and 20 degrees of fixation point.
2. Amaurosis fugax refers to a transient loss of vision in one or both eyes-like curtain descending in front of eye-may occur due to ischemia of retina or other causes.

04. MANAGEMENT OF GLAUCOMA

1. Photolytic glaucoma is caused by hyper mature cataract 's soluble proteins --best option is cataract surgery.
2. Trabeculotomy is filtration procedure--in which aqueous is drained into subtenon and Sub conjunctival space--done for glaucoma.
3. Beta blockers are contraindicated in asthmatic patients for galucoma bcz of bronchospasm (constrict airways)causing shortness of breath.
6. All of above mentioned drugs can be used topical for open angle glaucoma except acetolzamide (carbonic anhydrase inhibitor)poor solubility and penetration power.
7. Treatment options of angle closure glaucoma must include:antiglaucoma(systemic and topical e-g acetazolamide iv,hyperosmotics ,analgesics,antimetics,miotics(pilocarpine),topical steriods and others.
8. Tropicamide blocks muscarinic receptors in the circular muscle of the iris, causing mydriasis, which

narrows the anterior angle and may reduce aqueous drainage in angle-closure glaucoma.

10. Levobunolol is beta blocker--shouldn't be used in asthmatic patients bcz of bronchospasm.

11. Trabeculotomy is done to remove trabecular meshwork to establish communication between anterior chamber and schlemm canal in congenital glaucoma.

12. Argon laser trabeculoplasty/ ALT is considered in in patients when iop is uncontrollable despite medical therapy(consider age of patient: 70 years)

13. Trabeculectomy lowers iop by fistula-trabeculectomy with mitomycin c considered in young patients wih failed medical rx)age : 40 years)

14. Laser peripheral iridectomy is treatment for angle closure galucoma to create communication bw anterior and posterior cambers

15. β blockers and others are used in glaucoma in those patient-symptoms are acute-

16. CCT is a simple, non-invasive, short, ablative surgical procedure that has been effectively used to treat advanced uncontrolled glaucoma.

THE END

EYE-06

ORBIT /ANATOMY AND OCULAR TRAUMA

1. ORBIT ANATOMY

1.The commonest cause of unilateral proptosis in a young lady is:

a. Thyrotoxicosis
b. Metastatic deposits
c. Haemangioma
d. Orbital cellulitis
e. Trauma

2. In children the common association of orbital cellulitis is with:

a. Meningitis
b. Paranasal sinusitis
c. Measles
d. Septicemia
e. Retinoblastoma

3. Orbital Cellulitis:-

a. Does not cause motility disturbance
b. Frequently causes intracranial infection in children
c. Gentamicin is an appropriate antibiotic
d. Is most frequently caused by sinus infection
e. Is usually not accompanied by fever

4. A child has had recurrent episodes of Right ear ache and discharge along with fever for the last 1 year. For the last 2 days he has developed ipsilateral periorbital pain, ipsilateral failure of abduction of Right eye and ipsilateral weakness of facial muscles. The most likely site of infection is:

a. Cavernous sinus infection
b. Frontal sinusitis
c. Orbital Cellulitis
d. Petrous part of Temporal bone
e. Sphenoidal sinusitis

5. A 45 year old diabetic patient with a HbAIe of 14.5%develops a boil on left side of nose. 2 days later he es with Pain, Chon his vid the suited Visis in the left eye, he also had severe headache, nausea and ming. On examination Visual acuities are 6/6 Right and Counting fingers Left. The Left eye movements iced in all gasses and there is numbness in the upper divisions of the 5th Nerve. His left pupil is mid dandalen has a Left Relative Afferent Pupillary defect. On Fundoscopy the Left Optic Nerve is His body temperature is 101 F. After 24 hours the Right Eye develops similar features. The likely diagnosis is

a. Pharyngo conjunctival fever
b. Cavernous Sinus Thrombosis
c. Orbital Cellulitis
d. Preseptal Cellulitis
e. Tolosa Hunt Syndrome

6. A young girl 5 years old presents to the outdoor patient department with swelling of the eye. On examination, she is febrile and the swelling is red, hot & tender. Her visual acuity is normal, pupils are reacting light and the anterior segment is normal. What is your diagnosis?

a. Central retinal vein occlusion
b. Preseptal cellulitis of the orbit
c. Ear wax
d. Retinoblastoma
e. Exophthalmos

7. A 25 year old male comes with severe pain in the left eye with watering and discharge. He looks unwell. What is the most likely diagnosis?

a. Central retinal vein occlusion
b. Orbital cellulitis
c. Mucormycosis
d. Retinoblastoma
e. Exophthalmos

1.A	2.B	3.D	4.D
5.B	6.B	7.B	---

8. The organism commonly responsible for preseptal cellulitis in children is:

a. Staphylococcus aureus
b. Pseudomonas aeruginosa
c. Streptococcus pyogenes
d. Haemophilus influenzae
e. Proteus Mirabilis

9. A 4-year-old boy complains of pain around his right eye. He is unwell, febrile and also suffers from pain on the right side of his face. What is the most probable diagnosis?

a. Allergic reaction
b. Furuncle
c. Folliculitis
d. Foreign body
e. Periorbital cellulitis

10. A 40 years old female comes to the OPD with prominent eyes, grittiness and foreign body sensation in her both eyes for the last 6 months. On examination there is bilateral asymmetrical axial proptosis with lid retraction and lid lag. CT-Scan shows enlargement of recti muscles. Which is the most probable diagnosis?

a. Cavernous haemangioma
b. Orbital pseudotumor
c. Orbital cellulitis.
d. Optic nerve meningioma
e. Thyroid eye disease

11. Axial Proptosis occurs in

a. Frontal Mucocele
b. Lacrimal gland tumors
c. Maxillary carcinoma
d. Orbital floor fracture
e. Thyroid Ophthalmopathy

12. Most common cause of adult unilateral proptosis is:

a. Inflammation
b. Lymphoma
c. Meningioma
d. Metastasis
e. Thyroid orbitopathy

13. Ultrasonography is helpful in confirming the diagnosis of:

a. Central retinal artery occlusion
b. Central retinal vein occlusion
c. Retinitis pigmentosa
d. Subluxated clear crystalline lens
e. Thyroid Ophthalmopathy

14. A child has had recurrent episodes of Right ear ache and discharge along with fever for the last 1 year. For last 2 days he has developed ipsilateral periorbital pain, ipsilateral failure of abduction of Right rye and ipsilateral weakness of facial muscles. The most likely of infection is:

a. Cavernous sinus infection
b. Frontal Sin
c. Orbit
d. Petrous part of Temporal bone
e. Sphenoid sinus

15. The most common cause of proptosis is

a. Orbital hemorrhage
b. Orbital infection
c. Orbital tumor
d. Orbital pseudotumor
e. Thyroid ophthalmopathy

8.A	9.E	10.E	11.E
12.A	13.E	14.D	15.E

2. OCULAR TRAUMA

1. A labourer is brought to the emergency, who has sustained left eye injury while hammering a stone. On the examination, his left eye is red. There is a corneal scar at the 3 o'clock position. There is blood in the anterior chamber. He has developed a traumatic cataract and fundus is not visible. What will you do immediately to exclude any intraocular foreign body?

a. Check Intraocular pressure (IOP)
b. MRI
c. A-Scan
d. X-Ray Left Orbit AP & Lateral view
e. Direct ophthalmoscopic examination

2. The best emergency treatment of an alkali burn at the site of injury is:

a. Wash the eye with vinegar to neutralize the alkali
b. Immediately pad the eye
c. Give the patient oral antibiotics
d. Copiously wash the eye with clean water for at least 20 to 30 minutes
e. Inject steroids subconjunctivally

3. A 10 year old boy was hit on his right eye with a tennis ball while playing cricket. He is brought to the OPD with the complaints of diplopia, black and sunken eye. On examination, his lower eyelid is swollen. His right eye was sunken. His eye movements were restricted in his gaze. What can be the possible cause for his diplopia?
a. Medial Orbital wall fracture
b. Superior Rectus Paralysis
c. Orbital floor fracture
d. Orbital Haematoma.
e. Temporal orbital wall fracture

4. A mechanic presented with history of trauma while hammering a chisel. His visual acuity was perception of light. His fundus view was not clear on both direct and indirect ophthalmoscopy. On X-ray orbit he was diagnosed to be having intraocular foreign body, most probably an irun one If his intraocular foreign body is he is not removed most likely going to develop which
a. Chalcosis b. Siderosis
c. Retinal hemorrhage d. Vitreous hemorrhage
e. Optic neuritis

5. A Peshawar University student is hit in the right eye with a tennis ball. Once the ecchymosis around the eye has settled down he complains of double vision with numbness in the region of Infra orbital nerve. There is enophthalmos of the right eye. The most likely cause of post traumatic double vision is
a. Blow out fracture of orbit
b. Corneal rupture
c. Hyphema
d. Retinal detachment
e. Traumatic Optic Neuropathy

6. An Ironsmith is hammering an iron bar with a metal hammer. He notices that something went into his Left eye. On examination his Visual acuities are 6/6 both eyes, there is No pupillary defect. On anterior segment examination there is a small Sub conjunctival Hemorrhage 5 mun from the limbus on its temporal aspect. Comea is clear and the anterior segment is quiet. On Direct Ophthalmoscopy the posterior pole of Left Fundus is Normal but there is localized Vitreous Haemorrhage in the Infero Temporal quadrant of the eye obscuring the retina underneath. It decided to rule out Intraocular Foreign Body. One of the following is contra indicated in localizing intraocular foreign body in this patient b. Indirect
a. CT Scan b. Indirect Ophthalmoscopy
c. MR scan of eye
d. Ultrasound B scan of eye e. X-ray orbit

7. A 30 year old metal worker sustains trauma to his Right eye with a metal rod. He is found to have cranial rupture with iris prolapse. He is operated upon under General Anaesthesia, during the surgery the iris is acised and corneal wound repaired with interrupted sutures, 4 weeks later he presents with pain, photophobia, oaters and decreased vision in the Left eye. On examination the Visual acuity is 6/12 with normal IntraOcular Pressure. He has inflammatory cells in the anterior chamber and Vitreous with choroidal nodules. There are deposits of inflammatory cells on the corneal endothelium but no corneal staining. The most likely diagnosis is:
a. Conjunctivitis
b. Keratitis
c. Low tension Glaucoma
d. Scleritis
e. Sympathetic Ophthalmia

8. A painter of 40 years got victim with fresh lime getting into the right eye while working on a ceiling. He was immediately taken to hospital. The most effective treatment for this patient would be:
a. Removal of particulate chemical matter b. Irrigation of the eye Immediately
c. Antibiotics Drops (B)
d. Ascorbate topically e
e. Limbal stem cell transplantation

1.D	2.D	3.C	4.B
5.A	6.C	7.E	8.B

9. Siderosis is due to complications of which type of intraocular foreign body.

a. Copper b. Iron c. Sodium
d. Potassium e. Magnesium

10. The most common cause of sympathetic ophthalmitis is:

a. Chemical burns
b. Intraocular foreign body
c. Perforating injury at the limbus
d. Enucleation of sympathizing eyes
e.Vitreous loss during cataract surgery

11. Chalcosis is an ocular condition which develops in the eye in case of:

a. Iron Intraocular foreign body.
b. Chemical burns with the lime water.
c. Trauma with a piece of glass.
d. Copper Intraocular foreign body
e. Trauma to the eye with a piece of chalk

12. The management of a case of a suspected intra-ocular Foreign body includes all except

a. A-Scan of the eye b. B-Scan of the Eye
c. CT-Scan of the Orbit d. MRI-Orbits
e. X-ray skull

13. Regarding the risk factors of ocular trauma, which statement is NOT correct:

a. More common in Females
b. More common in low education group
d. More common in third world countries
c. More common in low income group
e. More common in old age

14. The first line of treatment in chemical injury is:

a. Oral analgesia
b. Saline Irrigation
c. Topical antibiotics
d. Topical cycloplegia
e. Topical Steroid

15. In blow out fracture the commonest bone to fracture is:

a. Ethmoidal (medial wall)
b. Frontal (roof)
c. Lachrymal (medial wall)
d. Maxillary (floor)
e. Zygomatic (lateral wall)

16. A 14 year old child is reviewed 7 days after developing Traumatic Hyphaema secondary to bluntbTrauma while playin g Squash. His Visual acuities, Pupillary reflexes are normal. Slit Lamp Examination did not reveal any abnormality. It is mandatory to carry out the following except:

a. Discharge without any further tests.
b. Counseling regarding the use of safety goggles.
c. IntraOcular Pressure check
d. Indirect Ophthalmoscopy along with Scleral Indentation
e. Gonioscopy

17. A 30 year old man accidentally splashes his eyes with a freshly made solution of quick lime. He is Mensely photophobic and cannot open his eyes properly. He presents to you in a BHU where you are working as a Medical Officer. What first aid treatment would you carry out for this gentleman?

a. Intravitreal antibiotics
b. Oral antibiotics
c. Topical broad spectrum Antibiotic
d. Topical Steroids
e. Wash the eye copiously with Normal Saline

18. A patient have blunt trauma with tennis ball and having hyphema, which is:

a. Blood in anterior chamber
b. Cells in anterior chamber
c. Foreign body in anterior chamber
d. Protein in anterior chamber
e. Pus in anterior chamber

19. A young man presents with severe chemosed conjunctiva and pulsatile proptosis in his left eye. There is bruit and thrill in the eye. He is having slight ptosis also in the same eye. He gives history of head injury in a road traffic accident few weeks back. What is your provisional diagnosis?

a. Meningoencephalocele
b. Cavernous sinus thrombosis
c. Carotid cavernous fistula
d. Orbital varices
e. Orbital Haemangioma

20. In Chemical burns of the Eye:

a. It is essential to take a good detail history first
b. Frequent eye wash is advisable
c. Cataract is not a complication
d. Vitamin A should be prescribed in high dose
e. Steroids are used in second week onwards

21. Which of the following options is incorrect regarding the management of hyphema?

a. Treat or control the cause if possible
b. Assess the level of hyphema
c. Assess the intraocular pressure (IOP)
d. Keep the IOP controlled with anti-glaucoma drugs
e. Surgical intervention/aspiration of blood is absolutely contraindicated

22. Which of the following statements is incorrect regarding the prognosis (follow-up) of eye injuries

a. The minor orbital blowout fractures heal without complications
b. Lid lacerations generally have very bad outcomes
c. Foreign bodies located inside the globe of the eye or in the orbit are more complicated
d. Full recovery from ultraviolet keratitis usually occurs within a few days
e. Decreased vision and glaucoma are complications of hyphema

23. An 18-year-old boy comes to the eye casualty with a history of injury with a tennis ball. On examination there is no perforation but there is hyphema. The most likely source of the blood is

a. Iris vessels
b. Circulus iridis major
c. Circulus iridis minor
d. Lacrimal vessels
e. Short posterior ciliary vessels

24. A 19-year-old boy presents with penetrating eye injury, hypopyon and hazy fundus after a road traffic accident. The most likely organism involved is

a. Bacillus cereus
b. Fungus
c. Pseudomonas species
d. Staphylococcus aureus
e. Staphylococcus epidermidis

9.B	10.C	11.D	12.D	13.E
14.B	15.D	16.A	17.E	18.A
19.C	20.B	21.E	22.B	23.B

24.D

HINTS AND EXPLANATION

1. Orbit/Anatomy;

1. Because most commonest cause of unilateral and bilateral proptosis in thyrotoxicosis.
2. Infective Organisms include streptococcus pneumoniae, staphylococcus aureus and Heamophilus influenza and 90% cases occurs due to sinus inflammation among which ethmoid sinusitis is more common.
3. Orbital cellulitis causes restricted movement and most frequently causes ocular complication. Vancomycin is drug of choice.
4. Supportive otitis media and ipsilateral paralysis of abducent Nerve (CN 6 which supply lateral rectus) occurs due to petrous inflammation.
5. As mentioned in the scenario that it develops after nose infection and sign and symptoms are chemosis , decrease vision, severe headache vomiting and periorbital numbenes papilledema on fundoscopy.
6. In preseptal cellulitis visual acuity is normal and RAPD is absent. While in CRVO visual Acuity is decreased or completely lost. And In retinoblastoma anterior Segment of eye shows chalky deposition.
7. In orbit cellulitis ther is severe pain and malaise. In CRVO there is painless vision loss. Retinoblastoma is disease of children. In mucormycosis infection will spread from nose to ethmoid sinus and there to eye.
8. Preseptal cellulitis occur 80% in children and common organism is staphylococcus aureus.
9. In preorbital cellulitis there is rapid onset of eye pain and fever.
10. Scenario shows middle age women with prominent eyes(Exophthalmia) which is chronic and there is lid retraction and lid lag which are signs of thyroid eye disease.
11. Axial proptosis occurs in retrobulbar lesion like glioma, meningioma, cavernous hemangioma and thyroid Ophthalmopathy. Non-axial proptosis occur in growth invading orbit from paranasal sinus, lacrimal gland.
12. Most common cause in adults is inflammation
Most common cause in children is orbital cellulitis.
13. CRAO diagnosed by FFA.
CRVO diagnosed by FFA+OCT
Retinitis pigmentosa diagnosed by OCT
Thyroid Ophthalmopathy diagnosed by Ultrasonography.
Subluxated lens diagnosed by OCT

2. OCULAR TRAUMA

1. X-Ray is best bacause it can be done immediately all other options are time consuming and expensive.
3. Trauma due to tenis ball , cricket ball, human first all are known as blowout fracture and they present as black eye also there wil be inferior oblique injury causing restricted movements in up gaze.
4. Siderosis is due to retain Iron Particles. Chalcosis is due to retain Copper Particles
5. In blow out fractures due to tenis ball there is injury to orbital nerve so complain wil be numbenes around eye.
6. MR is contraindicated bacause IOFB is metallic in nature.
7. In sympathetic ophthalmitis injured eye is red while the other eye is photophobic and also there is hint in scenerio showing anterior uveitis.

8. Best initiated treatment in case of alkali and acids is irrigation with water.

10. Sympathetic ophthalmitis is most frequently caused by penetrating wounds.

12. Because Incase of metallic IOFB. MRI can be dangerous its electromagnetic field can cause foreign body migration.potentially damaging intraocular tissues.

13. Majority of Ocular Trauma occurs in individuals below 17 years and it is one of highest case of children hospitalization.

15. In blow out fractures inferior wall is mostly commonly fracture due to its weakest point of Orbital wall.

16. Because Childrens are in high risk of groups and hospital admission is needed to control and prevent secondary Glaucoma.

19. Carotid Cavernous fistula is most commonly cause due to direct trauma to basal skull resulting in trearing of ICA within Cavernous sinus and also there is bruit present in eye.

21. It is not absolutely contraindicated 5% patient require surgical intervention only if intraocular pressure is uncontrolled.

22. Lid laceration heals spontaneously.

24. Bacillus Cereus spores are present on soil and enter body after road traffic accident or burns and causes hypopyon in eye.

THE END

EYE-07

SQUINT/ ERROR OF REFRACTION

1. SQUINT

1. A three years old child is brought to the OPD by his parents with the complaint of deviation of eyes. On having tight convergent squints. He is not cooperative to be examined with the ophthalmoscope. How will you proceed to manage this buy?

a. Prescribe some vitamins and call him when grows old enough to cooperate:
b. Do his forced duction test
c. Admit him for surgery for his right convergent squint
d. Do his cycloplegic retinoscopy and examination under anesthesia
e. Advise the parents to occlude his left eye so that he could use his right eye

2. A 6 month old female child is diagnosed with Right Cataract. The Left eye is normal. The rest of the examination of the Right eye is normal. The Ophthalmologist insists on carrying out urgent Right Phacoemulsification with Intra ocular implant to prevent

a. Anisometropic Amblyopia
b. Esotropia
c. Microtopia
d. Stimulus deprivation Amblyopia
e. Strabismic Amblyopia

3. A mother brings her 3 years old children with deviation of eyes since birth. The deviation the vene her 3 years old child with deviation in all directions of the gaze. The doctor tabelled the case as a non-paralytic squint. The most common cause of such type of squint is:

a. Refractive error
b. Abnormal ratio of AC/A
c. Convergence center's hypo or hyper activity
d. Divergence center's hypo or hyper activity
e. Sensory interference such as corneal opacity or congenital cataract

4. In case of incomitant squint, the angle of deviation of squint is:

a. Always more than 45 degrees
b. Is not equal in all directions of gaze
c. Vertical in all directions of gaze
d. Is less than 10 degrees.
e. Becomes more behind the cover

5. Accommodative squint if not treated in early childhood can lead to:

a. Stricture of extra ocular muscles.
b. Phthisis bulbi c. Amblyopia d. Diplopia
e . Hypertrophy of ciliary muscles

6. On school admission visual screening (at the age of 5 years) a boy with his left eye can only read 6/18 on Soellens visual acuity chart. The vision does not improve on pinhole examination. On distant direct ophthalmoscopy there is no media opacity. His refractive error is +1 diopter sphere in the right eye and +4 in the left eye. Ocular movements are normal. What is the most probable cause of reduced Visual acuity in the Left Eye?

a. Anisometropic Amblyopia
b. Hypertropia Strabismic Amblyopia
c. Microtropia
d. Stimulus deprivation Amblyopia
e. Strabismic Amblyopia

7. Esotropia is:

a. Alternate squint b. Convergent squint
c. Divergent squint d. Latent squint e. None

8. Accommodative squint if not treated in early childhood can lead to

a. Stricture of extra ocular muscles
b. Phthisis bulbi
c. Convergent squint
d. Diplopia
e. Hypertrophy of ciliary muscle

9. A 16 year old female child from Tirah has Visual Acuities of 6/6 Right and 6/24 Left. There is NO Relative Afferent Pupillary defect. Her Refractive errors are -1.0 Diopter in each eye. She had Exotropia in the Left Eye since the age of 1 Years but the rest of the examination of the eyes is normal. The cause of decreased vision in the

a. Anisometropic Amblyopia
b. Exophoria
c. Microtropia
d. Stimulus deprivation Amblyopia
e. Strabismic Amblyopia

10. The maximal advisable recession of the medial rectus, muscle in the initial surgical management for esotropia is

a. 3mm b. 4mm c. 5mm
d. 5.5mm e. 6mm

11. Which of the following can complicate Hypermetropia?

a. Non paralytic squint b. Latent squint
c. Exotropia d. Divergent squint
e. Paralytic squint

12. Squint which usually starts in early childhood and is usually constant, eyes retaining full range of movement is

a. Non paralytic squint b. Latent squint
c. Esotropia d. Divergent squint
e. Paralytic squint

1.E	2.D	3.A	4.B
5.	6.A	7.B	8.C
9.E	10.E	11.C	12.A

2. ERRORS OF REFRACTION

1. One of the point of identification of a convex spherical lens is that:

a. Object moves against the movement of the lens, when seen through it
b. Minimizes the size of the object
c. Object moves with the movement when seen through it
d. It diverges the parallel rays of light passing through it
e. Rays of light passing through it cannot be brought to focus at one point

2. Dioptric power of cornea is:

a. 18 diopters b. 23 diopters c. 33 diopters
d. 43 diopters e. 60 diopters

3. Angle formed by the letters of Snellen's acuity chart is at:

a. 5 min/arc b. 4 min/arc c. 3 min/arc
d. 2 min/arc e. 1 min/arc

4. In a patient with unilateral sudden decrease in vision if the Visual Acuity does NOT improve with pinhole then one of the following is NOT the likely diagnosis:

a. Vitreous Hemorrhage
b. Refractive Error of less than 6 Dioptres
c. Macular Degeneration
d. Central Retinal Artery Occlusion
e. Central Retinal Vein Occlusion

5. The magnification of fundus oculi by direct ophthalmoscopy in case of emmetropia is:

a. 5 times b. 10 times c. 15 times
d. 20 times e. More than 20 times

6. An ophthalmologist was explaining the causes of refractive errors to the residents. Using your knowledge, what is the most important cause of long sightedness?

a. Decrease in the axial length of eyeball
b. Decrease in the curvature of cornea eg. Plano cornea

c. Change in refractive index of the lens eg; Cortical cataract
d. Dislocation of the lens in the vitreous
e. Absence of the lens from an eye-aphakia

7. A 20 years female In interested in getting rid of her glasses. Her refraction reveals VA of 6/6 with 3.00 DS/0.50+900 and 6/6 in the left eye with 3.50 DS/0.75+900. The best treatment advice for her would be:

a.Contact lenses
b. Radial keratectomy
c. Photorefractive keratectomy
d. Laser in situ keratomileusis
e. Removal of clear less

8. In compound astigmatism, the parallel rays of light when pass through different meridians of the eve are brought to focus as two different lines, which are:

a. Both are focused on retina
b. One is focused in front of retina and other focused behind the retina
c. One is focused on retina and the other in front of retina
d. One is focused on retina and the other behind the retina
e. Both are focused either in front or behind the retina

9. The magnification obtained with a direct ophthalmoscope is:

a. 5 times b. 10 times c. 15 times
d. 20 times e. 25 times

10. A young lady presented with a refractive error of -4.0 D in her both eyes. She also gives history of Allergic Conjunctivitis. She is a working woman and does not want to wear glasses. What will be the most suitable treatment option?

a. Soft Contact Lenses
b. Hard Contact Lenses c. PRK
d. Lasik e. Radial Keratotomy

11. Regarding human eye:-

a. All refractive errors are corrected to 6/6 with a pin hole
b. Astigmatism is corrected with plus lens in the prescription
c. In an uncorrected hypermetropia the image falls behind the retina
d. In myopia (uncorrected) the image falls behind the retina
e. Minus lens is used to correct astigmatism

12. Unilateral aphakia is likely to be corrected by any of the following except:

a. Anterior chamber intraocular lens
b. Contact lens
c. Epikeratophakia
d. Glasses
e. Posterior chamber intraocular lens

13. Cylindrical lenses are used in the treatment of

a. Aphakia b. Astigmatism
c. Hypermetropia d. Myopia
e. Presbyopia

14. In Addition to High IOP and High vertical cup-disc ratio, risk factors for POAG include all of the following except

a. Black race b. Family history
c. Hypermetropia d. Increasing age
e. Myopia

15. In myopia, which one is true

a. Corneal radius of curvature is less
b. Image forms in front of the retina when the accommodation is relaxed
c. Lens is less spherical
d. Length of eyeball is short
e. Patient can see far objects clearly when he exerts accommodation

16. Retinoscopy is done for Examination of

a. Axial length of eye b. Optic nerve
c. Refractive power of eye d. Retina
e. The Fundus

17. Best vision in moderate myopia is achieved by

a. Glasses
b. Laser vision correction procedures
c. Radial keratotomy
d. Rigid gas permeable lenses
e. Soft contact lenses

18. According to W.H.O., a person is blind when

a. Vision in better eye is less than 3/60 and/or visual field is less than 10 degrees in better eye
b. Vision in better eye is less than 3/60 and/or visual field is less than 20 degrees in better eye
c. Vision in better eye is less than 3/60 and/or visual field is less than 30 degrees in better eye
d. Vision in better eye is less than 6/60 and/or visual field is less than 30 degrees in better eye
e. Vision in better eye is less than 6/60 and/or visual field is less than 10 degrees in better eye

19. Simple myopic astigmatism means

a. One meridian is myopic and the other is emmetropic
b. One meridian is hypermetropic and the other emmetropic
c. Both meridian are myopic
d. Both meridian are hypermetropic
e. Both meridian are emmetropic

20. Accommodation is maximum in:

a. Adulthood b. Childhood
c. Middle age d. Old age e. Women

21. The difficulty in focusing on objects that are close is

a. Astigmatism c. Myopia
b. Farsightedness d. Nearsightedness
e. Presbyopia

22. Regarding the indirect Ophthalmoscope:

a. The field of view is largest in hypermetropia
b. The field of view is largest in myopia
c. The field of view is several times larger than direct ophthalmoscope
d. The image of patient's retina is virtual
e. The image of patient's 'retina is erect

23. In photorefractive keratectomy with an ablation zone of 6.5mm, each diopter of correction removes comes tissue:

a. 01-10μ b. 11-20μ c. 21-30μ
d. 31-40μ e. 41-50μ

24. A 30 year old man has 6/5 vision each eye, unaided. His cycloplegic retinoscopy is +1.0 D sph. at 1 meter distance. His complaints are blurring of newsprint at 30 cm, which clears up in about two minutes. The most probable diagnosis is:

a. Hypermetropia
b. Presbyopia
c. Accommodative inertia
d. Cycloplegia
e. Myopia

1.A	2.D	3.A	4.B	5.C	6.A
7.D	8.E	9.C	10.D	11.C	12.A
13.B	14.C	15.B	16.C	17.	18.B
19.A	20.B	21.B	22.B	23.B	24.C

HINTS

SQUINT

1. Cover test is used to confirm & detect tropias. Uncover test is used for Phorias(latent deviation) Alternating cover test or cross-cover test is used to detect total deviation (Tropias+ Phorias)

2. When there is no image or reduced image formed on retina in early life such as due to ptosis, corneal opacity , congenital cataract.It produces stimulus deprivation ambylopia.

3. Most common cause of concomitant (non - paralytic) squint in children is Refractive error.

6. Anisometropic ambylopia occurs due to unequal refractive power of eyes.
The blurred image formation occur in the eye having high refractive error than the fellow eye.

7. Esotropia (Convergent squint)
Exotropia(Diverging squint)
Hypertropia(Upward deviation)
Hypotropia(Downward deviation)
Incyclotropia: Upper end of vertical corneal meridian deviates nasally.

SQUINT/ ERROR OF REFRACTION

Eccylotropia: Upper end of vertical corneal meridian deviates temporally.

9. Strabismus ambylopia occur in uniocular squint when there is continued mono-ocular suppression of the deviating eye.

ERRORS OF REFRACTION:

1. Object moves against the movement of lens when seen through convex lens & with the movement of lens when seen through concave lens.
Convex lens is a converging lens.

2. Anterior convex surface of cornea has
+ 48 dioptres refractive power
Posterior concave saurface= -5 Dioptres
Average power of cornea= +48+(-5)
= + 43 Dioptres

4. Because Refractive error improves with pinhole.Pinhole differentiate between organic & inorganic lesions of eye so as the refractive error is not an organic lesion,it should improve with pinhole.

6. Axial Hypermetropia is the most common cause of Hypermetropia in which the axial length of eyeball is short & that is why parallel rays of light focus behind the retina.

8. One is fixed on retina & other behind retina
(Simple Hypermetropia Astigmatism)
One is focused on retina and other Infront of retina
(Simple Myopic Astigmatism)
One is focused in front & other behind the retina
(Mixed Astigmatism)
Both are focused either in front of behind the retina
(Compound Astigmatism)

10. LASIK is permanent. It is used to correct myopia, Hyperopia & astigmatism. It corrects myopia upto 12 Dioptres & astigmatism upto 3 dioptrès.

11. a.[X] Because pinhole improves refractive error but not correct all refractive error upto 6/60.
It is used to differentiate only (Organic & Inorganic causes)
b[X] Astigmatism is corrected with cylindrical or spherocylindrical lenses.

C. Correct- In uncorrected hypermetropia, parallel rays of light focus behind the retina while accomodation is at rest.
d- (X) In uncorrected myopia, image falls Infront of retina

12. Glasses are always bilateral. They causes changes between refractive power of 2 eyes.

14. Pnemonic for risk factors of POAG HARR FMDS.
H: Hereditary A: Age R: Race
R: Retinal diseases [Retinitis pigmentosa] CRVO
F: Family history
M: Myopes
D : Diabetes
S: Steroid therapy

16. Decreased r = d/2 increased
As corneal radius of curvature decreases, diameter increases.(Refractive power increases)

19. (b) Simple Hypermetropia astigmatism
(c) Myopic Astigmatism
(d) Hypermetropic Astigmatism

20. In advancing age, there is decrease in accomodation power of lens due to loss of elasticity of crystalline lens.
At birth, accommodation power=
14-16 Dioptres
At 25 years = 7-8 Dioptres
At 50 years = 1-2 Dioptres

24. Accomodative inertia is the inability to change the accomodation of the eye with enough speed & accuracy to achieve normal function.
This can result in visual fatigue, headache & difficulty in reading,blurry vision.
Presbyopia (Aging phenomena)- Age >40

THE END

EYE-DB

CHOROID/IRIS/SCLERA/VITROUS BODY

1. CHOROID

1. A 40-year-old presents with gradual blurring of vision. On examination, vitreous opacities are seen and there is grey white raised patch on the retina. What is your diagnosis?

a. Retinal detachment
b. Choroiditis
c. Malignant melanoma of choroid
d. Senile macular degeneration
e. Optic atrophy

KEY: B

2. Iris

1. An 18 year old boy comes to the eye causality with a history of injury with a tennis ball. On examination there is no perforation but there is hyphema. The most likely source of the blood is:

a. Iris vessels
b. Major Arterial Circle of Iris
c. Minor Arterial Circle of Iris
d. Short posterior ciliary vessels
e. Long posterior ciliary vessels

2. D-Shaped pupil is seen in:

a. Iridectomy
b. Iridodialysis
c. Iridodonesis
d. Iris prolapse
e. Iridoplegia

3. Which of the following regarding atropine is true?

a. Causes anhidrosis
b. Causes Cycloplegia
c. Causes Hallucinations
d. Causes Hyperthermia
e. All of above

4. A 52-year-old man has a painful, red, photophobic right eye with slightly blurred vision and watering for 3 days. He has had no such episodes in the past. On slit lamp examination there are cells and flare in the ant chamber and pupil is sluggish to react. What is the single most appropriate clinical diagnosis?

a. Acute closed-angle glaucoma
b. Acute conjunctivitis
c. Acute dacryocystitis
d. Acute iritis
e. Corneal foreign body

5. A 20 year-old male presents, with acute onset pain and redness in left eye and also complains of blurred Whion. On examination, there is circum-corneal congestion, cornea is normal but pupil is small and irregular. What is the most likely diagnosis?

a. Closed angle glaucoma
b. Acute iritis
c. Conjunctivitis
d. Subconjunctival hemorrhage
e. Episcleritis

6. A 22-year-old man has had an acute, painful, red right eye with blurring of vision for one day. He had a similar episode 1 Year ago and has had episodic back pain and stiffness relieved by exercise and diclofenac for four years. What is the SINGLE most likely cause of his red eye?

a. Chorioretinitis
b. Conjunctivitis
c. Episcleritis
d. Iritis
e. Keratitis

1.B	2.E	3.E	4.D	5.B	6.D

3. Sclera

1. A 55 Year old lady suffers from Rheumatoid arthritis. She has developed intensely Painful Red Left eye Her Visual acuities are 6/12 both eyes improving to 6/6 with pin hole. In her Left eye she has red nodular swelling approximately 2 mm from the temporal limbus. The swelling is tender and fixed. It does not blanch with the use of Phenylephrine. The most likely is:

a. Scleritis b. Iritis c. Keratitis
d. Conjunctivitis e. Choroiditis

2. All of the following are involved in endophthalmitis except?

a. E.Lens b. Sclera c. Retina
d. Uvea e. Vitreous

3. A 55 year old lady suffers from Rheumatoid arthritis. She has developed an intensely Painful Red Left eye. Her Visual acuities are 6/12 both eyes improving to 6/6 with pin hole. In her Left eye she has red nodular swelling approximately 2 mm from the temporal limbus. The swelling is tender and fixed. It does not blanch with the use of Phenylephrine. The most likely is:

a. Scleritis b. Iritis c. Keratitis
d. Conjunctivitis e. Choroiditis

4. Which of the following ocular involvements occurs in Rheumatoid arthritis?

a. Uveitis b. Iritis
c. Keratoconjunctivitis sicca
d. Scleritis e. Pizza pie fundus

5. A 54-year-old myopic develops flashes of light and then sudden loss of vision. What is the single most appropriate treatment?

a. Pan retinal photocoagulation
b. Peripheral iridectomy
c. Scleral buckling
d. Spectacles
e. Surgical extraction of lens

6. A 36-year-old lady comes with a history of early morning stiffness of her small joints and red and painful eye. What is the single most appropriate option?

a. Iris b. Ciliary body
c. Cornea d. Conjunctivitis e. Sclera

1.A	2.B	3.A	4.D	5.C	6.E

4. Vitreous

1. A Raised ESR and C reactive Protein can be a finding in all except one of the following:

a. Anterior Ischaemic Optic Neuropathy
b. Central Retinal Artery Occlusion
c. Central Retinal Vein Occlusion
d. Optic Neuritis
e. Vitreous Haemorrhage secondary to Posterior Vitreous Detachment

2. A 60 year old Diabetic and Hypertensive man for the last 20 years has developed sudden painless decrease in vision in the Right eye, his visual acuities are HM and 6/12 Right and left eyes respectively. He has No RAPD. ALL except one can be the cause of reduced vision:

a. Anterior Ischaemic Optic Neuropathy
b. Central Retinal Artery Occlusion
c. Central Retinal Vein Occlusion
d. Cilio Retinal artery Occlusion
e. Vitreous Haemorrhage secondary to Posterior Vitreous Detachment

3. In a patient with Sudden Decrease in vision and a Relative Afferent Pupillary Defect in the affected eye, which of the following is NOT the likely diagnosis:

a. Anterior Ischaemic Optic Neuropathy
b. Central Retinal Artery Occlusion
c. Central Retinal Vein Occlusion
d. Retrobulbar Optic Neuritis
e. Vitreous Haemorrhage secondary to Posterior Vitreous Detachment

1.E	2.E	3.E

4. A 25 year old male gives a history of sudden painless loss of vision in one eye for the past 2 weeks. There is no history of trauma. On examination the anterior segment is normal but there is no fundal glow. Which one of the following is the most likely cause?

a. Acute attack of angle closure glaucoma
b. Central Retinal V. Occlusion
c. Developmental cataract
d. Optic atrophy
e. Vitreous hemorrhage

5. The most common cause of vitreous hemorrhage in old age is:

a. CRVO b. Diabetes c. Hypertension
d. Retinal hole e. Trauma

6. A 20 year old male who has been a Type 1 diabetic for the last 15 years develops a severe dry cough. During a particularly severe episode of coughing he suddenly develops painless sudden decrease in vision in BOTH The visual acuities are 6/60 both eyes with NO improvement with pinhole. On examination there is NO Relais Afferent Pupillary Defect and Intra ocular pressure were recorded as 23mm Hg in both eyes. The Red reflex is markedly reduced in both eyes on Distant Direct Ophthalmoscopy and there are media opacities which move both ret the movement of eye. On Direct Ophthalmoscopy Retinal Ned there are media opacities the periphery of both retinae but the details of the Central Retina are obscured. The most likely cause of reduced red reflex is:

a. Vitreous Haemorrhage.
b. Retinal Vein Occlusion.
c. Retinal Artery Occlusion
d. Optic Neuropathy e. Cataract

7. Hyaluronic acid is present in:

a. Aqueous humor b. Cornea
c. Lens d. Retina e. Vitreous

8. 40-year-old diabetic presents with acute loss of vision. On examination the retina is not seen. What is the most likely diagnosis?

a. Central retinal artery occlusion
b. Central retinal vein occlusion
c. Ischemic optic neuropathy
d. Papilloedema
e. Vitreous hemorrhage

4.E	5.B	6.A	7.E	8.E

HINTS AND EXPLANATION SKIPPED.