

Centurion University of Technology and Management

School of Applied Sciences , PKD.

Department of Óptometry

Optometry Question Bank

C o m p i l e d b y

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: Long Questions :

Embryology and Anatomy:-

1. Development, structures & attachment of **Vitreous**.
2. Describe the **Anatomy and Blood Supply of Optic Nerve with Diagram**.
3. Discuss the **Anatomy of the Lens & its Development**.
4. Write the **Anatomy of Angle of Anterior Chamber**.
5. Draw and describe the **Structure of Upper Eye Lid**. Describe the origin, insertion and nerve supply of **Levator Palpebrae Superioris**.
6. Discuss the **Micro and Macro Anatomy of Retina**.
7. Describe the **Anatomy of Cornea** and its **Congenital Anomalies**.
8. Write the development, anatomy and anomalies of **Nasolacrimal Passage**.
9. Describe the structures and development of **Crystalline Lens** and its various attachments.
10. Describe the closure of **Foetal Fissure** and the results of imperfect closure during development.
11. Describe the normal structure of **Iris** and its abnormalities.
12. **Extra Ocular Muscles**.

Physiology of the Eye:-

1. Describe the factors responsible for maintenance of **Corneal Transparency**. How would you **Assess the Corneal Endothelium?**
2. How does cornea maintain its transparency? Write various factors that include **Corneal Vascularisation** and outline the **Process of Corneal Wound Healing**.
3. Describe the **Metabolism of Cornea**. How does cornea maintain its transparency?
4. Describe the **Actions of different Extraocular Muscles** and the **Fundamental Laws governing Ocular Motility**.
5. Describe the **Factors responsible for maintenance of normal IOP. Diurnal Variation**.
6. Discuss the detailed physiology of **Aqueous Humor Formation & Outflow**.
7. **Lens Metabolism**.

Physiology of vision:-

1. Describe the physiological basis and clinical applications of **ERG**.
2. Describe the **Electrophysiological investigations** for various ocular disorders and their interpretations.

Ocular Pharmacology:-

1. Discuss the various **Antiviral Drugs** used in ophthalmology.
2. Discuss the **Newer Antiglaucoma Drugs**.
3. What are drugs used for **Intra-vitreous Therapy**. Write its indications & complications.

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4. Role of **Immunosuppressive drugs** in Ophthalmology.

Refraction of the Normal Eye:-

1. What do you understand by **Schematic and Reduced Eye**? Describe with proper diagram. Describe the **Use of Schematic Eye**.

Refractive Errors:-

1. Discuss the various **Refractive Surgeries** with their advantages and disadvantages.

The Estimation & Correction of Refractive Errors:-

1. What is **Retinoscopy**? What are the principles and methods of retinoscopy?
2. Describe **Indirect Ophthalmoscopy** with its optical principle with diagram. Discuss its advantages over direct and its recent advancement.
3. Describe the **Optics of IDO with Diagram**. What is its difference with direct ophthalmoscopy.

Diseases of the Eyelid:-

1. Classify **Ptosis**. How will you manage a case of ptosis?
2. Describe the different **Surgical Treatment of Ptosis**.
3. Describe morphology & histopathological examination of common **Malignant Lesions of Eyelid**.

Diseases of the Conjunctiva:-

1. Describe the clinical feature and management of **Conjunctivitis**.
2. Discuss briefly the **Mucocutaneous affection of the eye** and outline the management.
3. Management of **Recurrent Pterygium**.

Diseases of the Cornea & Sclera:-

1. Discuss the clinical features and management of **Pseudophakic Bullous Keratopathy**.
2. **Peripheral Corneal Degeneration**.
3. Give detailed account of **Herpes Zoster Ophthalmicus**.
4. What are the different **Viral Keratitis**? Write clinical features and management.

Diseases of the Uvea:-

1. Describe the symptoms and signs of **Acute Anterior Uveitis** and its management.
2. **Ocular Toxoplasmosis**.
3. **Granulomatous Uveitis**.
4. Early diagnostic feature & management of **Post Operative Case of Endophthalmitis**.

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Diseases of the Lens:-

1. Surgical management of **Paediatric Cataract**.
2. Discuss the various **IOL and its Development**. Write about the advantages and disadvantages.
3. Discuss the management of a case of **Cataract with Uveitis**.
4. Management of **Posterior Dislocation of Lens**.
5. Discuss the management of **Congenital Cataract**.

The Glaucomas:-

1. Describe clinical feature & differential diagnosis of **Congenital Glaucoma**.
2. Describe the clinical features, differential diagnosis and management of **Congenital Glaucoma**.
3. Describe the **Formation of Aqueous Humor & Drainage**. Describe **Acute Congestive Glaucoma** in short, its symptoms, sign and management.
4. Describe the different **Provocative Tests of Glaucoma**.
5. How will you **Measure IOP**? What are the **Factors that Influence IOP**? Write the merits and demerits of **Various types of Tonometry**.
6. Describe the **Principle of Gonioscopy** and its **Clinical Importance**.
7. Describe the newer diagnostic modalities and medical management of **Primary Open Angle Glaucoma**.
8. **Traumatic Glaucoma**.

Diseases of the Vitreous:-

1. Discuss the causes and management of **Vitreous Haemorrhage**.
2. What are the various causes of **Vitreous Haemorrhage**? Outline the management.

Diseases of the Retina:-

1. Discuss pathogenesis of **Diabetic Retinopathy**. How will you manage such case?
2. Classification, pathogenesis, clinical features of **Diabetic Retinopathy**.
3. Write the classification, clinical features and management of **Retinopathy of Prematurity**
4. C/F and management of **Diabetic Retinopathy**.
5. Describe pathogenesis, clinical features and management of **Diabetic Maculopathy**.
6. **Non Proliferative Diabetic Retinopathy**.
7. Pathogenesis of **Retinal Detachment**.
8. Classify **Retinal Detachment**. Discuss the basic steps of **Retinal Detachment Surgery**.
9. Discuss the pathogenesis, classification, clinical features and management of **Hypertensive Retinopathy**.
10. Write the aetiopathogenesis and management of **Central Serous Retinopathy**.

Optometry, Question Bank

11. What are the **Recent Advances in Age-Related Macular Degeneration?**
12. Describe the pathogenesis, clinical features and management of **Central Retinal Vein Occlusion.**

Neuro-Ophthalmology:-

1. Discuss the pathogenesis and differential diagnosis of **Papilloedema.**
2. What are the causes of **Bilateral Optic Disc Swelling?** How will you investigate & manage it?
3. Discuss the clinical features and management of **Optic Neuritis.**
4. Etiology & clinical features & management of **Papilitis.**
5. Describe the aetiopathogenesis and management of **Optic Neuropathy.**
6. How will you investigate and manage a case of **3rd Cranial Nerve Palsy?**

Intraocular Tumors:-

1. Describe the clinical picture and treatment of **Retinoblastoma.**
2. Describe the histopathology, mode of presentation and spread of a case of **Retinoblastoma.** Write down the investigation procedures and line of management.
3. Discuss the differential diagnosis of **White Pupillary Reflex.**
4. Discuss the histopathology of **Malignant Melanoma of Eye.** Discuss the mode of spread and its prognosis.
5. Pathological prognostic factors and cytological classification of **Choroidal Melanoma.**

Diseases of the Orbit:-

1. Write the causes of **Proptosis in Children** and how will you manage it?
2. Describe the pathology of **Dysthyroid Ophthalmoplegia.** Write down the investigation and management.

Diseases of the Lacrimal Apparatus:-

1. Describe the clinical course of **Acute Dacryocystitis** and management.

Ocular motility: Squint:-

1. Discuss the mechanism of development, diagnosis and management of various **Amblyopia.**
2. An young adult having **Diplopia of recent origin.** How will you investigate the case to come to a definite diagnosis?
3. Discuss the etiology, C/F and management of **Paralytic Strabismus.**
4. Describe the causes of **Lateral Rectus Palsy.** Discuss their management.

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Ocular Injuries:-

1. Histopathology & possible etiologies of **Sympathetic Ophthalmitis**.
2. Management of **Hyphaema**.
3. C/F and management of **Retained Intraocular Foreign Body**.

Metabolic & Systemic Diseases of the Eye:-

1. A patient of **Tuberculosis** came to you with the complaint of **Dimness of vision**. What may be the causes? Discuss the management.
2. Describe the **Ocular Complications of T.B.**
3. Discuss the ocular manifestations of **Inborn Error of Metabolism** except Diabetes.
4. **Ocular Manifestations of AIDS**.

Common Eye Surgeries:-

1. **DLEK**.
2. Describe detail technique of **Deep Lamellar Endothelial Keratoplasty (DLEK)**.
3. Indication, contraindication and complication of **Penetrating Keratoplasty**.
4. How do you manage a **Post Operative Shallow Anterior Chamber following a Trabeculectomy?**
5. Discuss the various **Refractive Surgeries** with their advantages and disadvantages.
6. Describe the various procedures for **Small Incision Cataract Surgery** and its advantages & disadvantages.
7. Classify **Retinal Detachment**. Discuss the basic steps of **Retinal Detachment Surgery**.

Blindness and its prevention:-

1. Describe in short “**The National Programme for control of Blindness**.”
2. What are the manifestations of **Vitamin A deficiency**? How will you manage them?
3. Discuss the ocular manifestations in various forms of **Nutritional Disorders**.
4. Causes of **Painless Gradual Loss of Vision in Elderly**. Causes of **Blindness in Children in India**.

Miscellaneous:-

1. Discuss use of **Laser in Ophthalmology**.
2. Write pre-operative evaluation, patient selection & complication of **LASIK**.
3. Discuss the clinical utility of **OCT**.

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4. What are the **Uses of Ultrasonography in Ophthalmology?**
5. Describe the different **Methods of Examination of Cornea.**

: Short Questions :

Embryology & Anatomy:

1. Levator Palpebrae Superioris.
2. Superior Orbital Fissure.
3. Angle of Anterior Chamber.
4. Ciliary Ganglion.
5. Surgical Limbus.
6. Superior Oblique Muscle.

The Physiology of Eye & Vision:

1. Hemianopia.
2. Adie's Pupil.
3. Marcus Gunn Pupil.
4. Theories of Colour Vision.
5. Colour Vision Tests.
6. Functions of Tear.
7. Dark Adaptation.
8. V.E.R.
9. Pupillary Pathway.
10. Binocular Vision.
11. Horopter.
12. E.R.G.
13. Applanation Tonometry.

Ocular Pharmacology:

1. Beta Blockers used in Eye.
2. P.G Analogue.
3. Tear Substitutes.
4. Visco-Elastic Substances.

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5. Uses of Visco-elastic Substance in Ophthalmology.

Optics & Refractions:

1. Prism.
2. Use of Prism in Ophthalmology.
3. Principle of Retinoscopy.
4. Low vision aids.
5. Optics, uses and care of Contact Lenses.
6. Therapeutic uses of Contact Lens.
7. Accommodation.
8. Anomalies of Accommodation.
9. Myopia.
10. Pathological Myopia.
11. Astigmatism.
12. Strum Conoid.

Diseases of the Eyelid:

1. Stye.
2. Hordeolum Internum.
3. Blepharospasm.
4. Symblepharon.
5. Z-plasty.

Diseases of the Conjunctiva:

1. Pterygium.
2. Pterygium.
3. Phlyctenules.
4. Steven-Johnson Syndrome.
5. Sjogren's syndrome.
6. Conjunctival Concretions.

Diseases of the Cornea & Sclera:

1. Staining of Corneal Ulcer.

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2. Neuroparalytic Keratitis.
3. Hypopion.
4. Episcleritis.
5. Anterior Staphyloma.

Diseases of the Uvea:

1. Rubeosis Iridis.
2. Essential atrophy of Iris.
3. Iris Bombe.
4. Pars Planitis.
5. Endophthalmitis.
6. Bechet's Disease.
7. Keratic Precipitates.
8. Bird-shot Choroidoretinopathy.
9. Serpiginous Choroidopathy.
10. Posterior Synaechia.

Diseases of the Lens:

1. Different of areas in Cataract.
2. Investigations of a case of Cataract before surgery.
3. Marfan's Syndrome.
4. Spontaneous dislocation of Lens.

The Glaucomas:

1. Gonioscopy.
2. Applanation Tonometry.
3. Various types of Tonometry and its merits and demerits.
4. Buphthalmos.
5. Diagnosis of Primary Open Angle Glaucoma.
6. Steroid Induced Glaucoma.
7. Management of Intractable Glaucoma.
8. Malignant Glaucoma.
9. Possner Scholssman's Syndrome.
10. Pseudoexfoliation Syndrome.
11. Glaucomatous Cupping of Optic Disc.

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Diseases of the Vitreous:

1. Vitreous Floaters.
2. Eale's Disease.
3. Vitreous Substitutes.

Diseases of the Retina:

1. Diabetic Retinopathy.
2. Cytomegalovirus Retinitis.
3. ARMD.
4. Macular Hole.
5. Management of Diabetic Macular Edema.
6. Stargardt's Disease.
7. Retro- Lental Fibroplasias.

Diseases of the Optic Nerve:

1. Etiology & C/F & Treatment of Papillitis.
2. Foster Kennedy Syndrome.
3. Morning Glory Syndrome.
4. Pseudotumor Crebri.

Diseases of the Orbit:

1. Cavernous Sinus Thrombosis.
2. Painful Ophthalmoplegia.
3. Pseudotumour of Orbit.
4. Pulsatile Proptosis.

Ocular Motility: Squint:

1. Amblyopia.
2. Toxic Amblyopias.
3. Heterophoria.
4. Microtropia.

Ocular Injuries:

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1. Hyphaema.
2. Siderosis Bulbi.
3. Dalen Fuch's Nodule.
4. Black Eye.
5. Foreign Body of Cornea.

Common Eye Surgeries:

1. Faden Operation.
2. Phacolit.
3. Conductive Keratoplasty.
4. Pneumatic Retinopexy.
5. Retinotomy.
6. Complications of D.C.R surgery.

Blindness & its prevention:

1. Night Blindness.
2. Bitot Spot.
3. Vit-A Deficiency.
4. Causes of Blindness in children in India.
5. Eye care and Education in School-going Children.
6. Visual Impairment & causes of Blindness in India.
7. Vision 2020.
8. Duty of a Health Assistant at P.H.C.
9. Eye Bank.

Miscellaneous:

1. Argon Laser.
2. Corneal Topography.
3. Keratometry.
4. O.C.T.
5. Role of O.C.T in Anterior Segment abnormalities.
6. Ophthalmodynamometry.
7. Confocal Microscopy.
8. Keratometer.
9. Different types of Anaesthesia in Cataract Surgery.

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10. Intravitreal Triamcinolone Acetonide.
11. Stem-cell Transplant in Ophthalmology.
12. Limbal Stem-cell.
13. Amniotic Membrane Graft.

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