

INI CET Ophthalmology

Sample Paper – 2

Duration: 14 Minutes

Maximum Marks: 15

Instructions

- This paper contains **15** Multiple Choice Questions (Single Best Response), modelled on the Ophthalmology content of **INI CET** (Institutes of National Importance Combined Entrance Test) conducted by AIIMS New Delhi.
- The **15-question** length matches the number of Ophthalmology items you actually meet in the real 200-question paper.
- Each correct answer carries **+1 mark**. There is **negative marking of one-third (0.33) mark** for every incorrect answer; unattempted questions carry no penalty.
- Every question has **exactly one best answer**. Choose the single most appropriate option.
- Attempt this practice paper in one timed sitting of about **14 minutes**, the pace the real computer-based test demands.

Cornea, Conjunctiva and Anterior Segment

- Q1.** A farmer presents with a corneal ulcer that has dry, raised, feathery margins, surrounding satellite lesions and a hypopyon, following an injury with a tree branch (vegetative matter). The most likely diagnosis is:
- (A) Bacterial corneal ulcer
(B) Fungal keratitis
(C) Herpes simplex (dendritic) keratitis
(D) Marginal allergic keratitis
- Q2.** A young boy complains of intense itching, ropy stringy discharge and photophobia that worsen every summer, and examination shows giant cobblestone papillae on the upper tarsal conjunctiva. The diagnosis is:



- (A) Vernal keratoconjunctivitis
- (B) Acute bacterial conjunctivitis
- (C) Trachoma
- (D) Episcleritis

Q3. A triangular fibrovascular fold of degenerated bulbar conjunctiva that grows from the nasal side across the limbus onto the cornea, commoner in people with heavy sun and dust exposure, is:

- (A) Pterygium
- (B) Pinguecula
- (C) Trachomatous pannus
- (D) Limbal dermoid

Lens and Glaucoma

Q4. When grading a senile cataract on oblique (slit-lamp) illumination, an immature cataract is distinguished from a mature cataract by the fact that:

- (A) A mature cataract still casts a clear iris shadow
- (B) An immature cataract is only partially opaque and still casts an iris shadow, whereas a mature cataract is completely opaque and casts no iris shadow
- (C) An immature cataract is completely opaque with no iris shadow
- (D) A mature cataract permits a normal red reflex

Q5. An infant is brought with a large, watery, photophobic eye and a hazy (cloudy) enlarged cornea. The most likely diagnosis is:

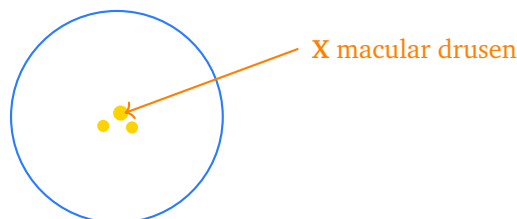
- (A) Congenital cataract
- (B) Congenital glaucoma (buphthalmos)
- (C) Retinoblastoma
- (D) Ophthalmia neonatorum



- Q6.** An elderly patient with a long-standing untreated cataract develops a sudden painful red eye with raised intraocular pressure; the intumescent (swollen) lens has pushed the iris forward and closed the drainage angle. This secondary glaucoma is:
- (A) Primary open-angle glaucoma
 - (B) Congenital glaucoma
 - (C) Phacomorphic glaucoma
 - (D) Neovascular glaucoma

Retina and Vitreous

- Q7.** A short-sighted (myopic) patient reports sudden flashes of light, a shower of new floaters and then a dark curtain descending over part of the vision. The most likely diagnosis is:
- (A) Central serous retinopathy
 - (B) Vitreous haemorrhage
 - (C) Optic neuritis
 - (D) Rhegmatogenous retinal detachment
- Q8.** An elderly patient reports gradual loss of central vision with distortion of straight lines, and the fundus shows yellowish drusen deposits at the macula (marked X). The diagnosis is:



- (A) Primary open-angle glaucoma
- (B) Central retinal artery occlusion
- (C) Age-related macular degeneration
- (D) Retinitis pigmentosa

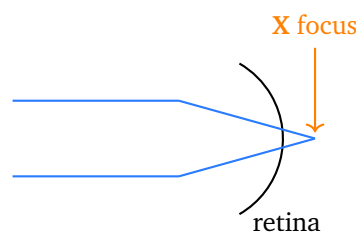


Neuro-ophthalmology and Optics

Q9. A young woman develops subacute unilateral loss of vision with pain on eye movement and a relative afferent pupillary defect; the episode is often the first presentation of multiple sclerosis. The diagnosis is:

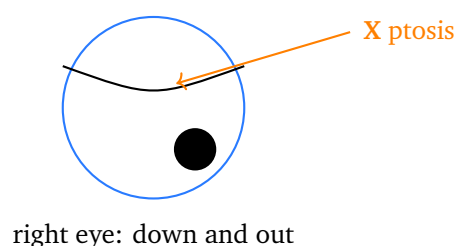
- (A) Optic neuritis
- (B) Papilloedema
- (C) Optic atrophy
- (D) Central serous retinopathy

Q10. The ray diagram below shows parallel light in an uncorrected eye focusing at the point marked X, behind the retina. This refractive error, and its correcting lens, are:



- (A) Myopia, corrected with a concave (minus) lens
- (B) Emmetropia, needing no correction
- (C) Astigmatism, corrected with a cylindrical lens
- (D) Hypermetropia, corrected with a convex (plus) lens

Q11. The schematic below shows a patient's right eye deviated 'down and out', with a drooping upper lid (ptosis, marked X) and a dilated pupil. This indicates a palsy of the:



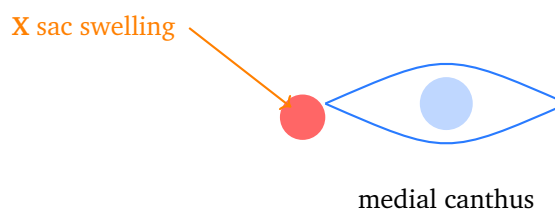
- (A) Fourth (trochlear) nerve
- (B) Sixth (abducens) nerve
- (C) Facial (seventh) nerve
- (D) Third (oculomotor) nerve

Uvea, Orbit and Ocular Adnexa

Q12. A painless, firm, slowly growing nodule within the tarsal plate of the eyelid, caused by chronic lipogranulomatous inflammation of a blocked meibomian gland, is a:

- (A) Chalazion
- (B) Sty (external hordeolum)
- (C) Basal cell carcinoma
- (D) Acute dacryocystitis

Q13. The schematic shows a tender red swelling at the medial canthus (marked X) with watering, and pus regurgitates through the punctum on pressure. With a blocked nasolacrimal duct, the diagnosis is:



- (A) Chalazion
- (B) Orbital cellulitis
- (C) Acute dacryocystitis
- (D) Sty (external hordeolum)

Paediatric Ophthalmology and Emergencies

Q14. A preterm, low-birth-weight infant who received supplemental oxygen develops abnormal neovascularisation at the junction of the vascular and avascular peripheral retina. The most likely diagnosis is:



- (A) Retinoblastoma
- (B) Congenital cataract
- (C) Retinopathy of prematurity
- (D) Persistent hyperplastic primary vitreous

Q15. A boy is struck in the eye by a ball and presents with blood settling to a horizontal level in the anterior chamber. Together with rest and head elevation, the correct term and first management principle is:

- (A) Hypopyon; start topical antibiotics as the priority
- (B) Hyphaema; rest with the head elevated and avoid strenuous activity to reduce the risk of rebleeding
- (C) Endophthalmitis; perform an urgent vitrectomy
- (D) Subconjunctival haemorrhage; reassurance only



Detailed Solutions**Q1.****Solution**

Concept – fungal keratitis: A corneal ulcer following injury with plant matter has a characteristic look that separates it from bacterial disease.

Step 1 – read the clues: Dry, raised, **feathery margins**, surrounding **satellite lesions** and a hypopyon after **vegetative (branch) trauma** point strongly to **fungal keratitis**.

Step 2 – confirmation and treatment: Corneal scraping with potassium hydroxide mount and culture confirm the fungus; topical natamycin or voriconazole is used, not simple antibiotics.

Why the other options are wrong:

- A, bacterial ulcer: gives a wet, sharply defined ulcer with mucopurulent slough, not dry feathery margins.
- C, herpes simplex keratitis: gives a branching dendritic ulcer, usually without a plant-injury history.
- D, marginal allergic keratitis: gives small peripheral infiltrates near the limbus, not a central feathery ulcer with hypopyon.

Final Answer: Fungal keratitis ⇒ **B**

Answer: (B) [Go Back to Q1](#)

Q2.**Solution**

Concept – vernal keratoconjunctivitis (VKC): VKC is a recurrent, seasonal, bilateral allergic inflammation of the conjunctiva, typically in young boys.

Step 1 – match the signs: **Intense itching**, ropy discharge, photophobia and giant **cobblestone papillae** on the upper tarsal conjunctiva, worse in summer, define VKC.

Step 2 – management: Allergen avoidance, mast-cell stabilisers, antihistamines and short courses of topical steroids control the flares.

Why the other options are wrong:

- B, bacterial conjunctivitis: gives sticky pus and redness, not itching with cobblestone papillae.



- C, trachoma: is a chronic chlamydial infection causing tarsal follicles and scarring, not seasonal itching.
- D, episcleritis: is a localised patch of scleral redness without papillae or itching.

Final Answer: Vernal keratoconjunctivitis ⇒ A

Answer: (A) [Go Back to Q2](#)

Q3.

Solution

Concept – pterygium: A pterygium is a wing-shaped fibrovascular degeneration of the bulbar conjunctiva that encroaches onto the cornea.

Step 1 – name the lesion: A **triangular fibrovascular fold** growing from the **nasal** conjunctiva across the limbus onto the cornea, linked to sun and dust exposure, is a pterygium.

Step 2 – why it matters: It can advance towards the pupil and induce astigmatism; surgical excision with a conjunctival autograft is used when vision is threatened.

Why the other options are wrong:

- B, pinguecula: is a similar degeneration but stays at the limbus and does *not* cross onto the cornea.
- C, trachomatous pannus: is fibrovascular tissue growing over the *superior* cornea from chronic trachoma.
- D, limbal dermoid: is a congenital rounded (not triangular) tumour at the limbus.

Final Answer: Pterygium ⇒ A

Answer: (A) [Go Back to Q3](#)

Q4.

Solution

Concept – grading a senile cataract by the iris shadow: The iris-shadow test on oblique illumination separates an immature from a mature cataract.

Step 1 – apply the test: An **immature cataract** is only partially opaque, so light passing obliquely still casts a crescentic **iris shadow** on the lens; a **mature**



cataract is completely opaque, so **no iris shadow** is seen.

Step 2 – link to appearance: The immature lens is greyish-white with a partial red reflex; the mature lens is pearly-white with an absent red reflex.

Why the other options are wrong:

- A: a mature cataract casts *no* iris shadow, so this is reversed.
- C: an immature cataract is only partly opaque, not completely opaque.
- D: a mature cataract abolishes the red reflex; it does not permit a normal one.

Final Answer: Immature casts an iris shadow, mature casts none $\Rightarrow$ **B**

Answer: (B) [Go Back to Q4](#)

Q5.

Solution

Concept – congenital glaucoma (buphthalmos): Raised intraocular pressure in infancy stretches the elastic young eye, enlarging the globe.

Step 1 – read the triad: A **large watery eye**, **photophobia** and a hazy enlarged cornea in an infant make up the classic triad of congenital glaucoma (buphthalmos).

Step 2 – mechanism and treatment: A developmental block of the trabecular meshwork raises pressure; surgery (goniotomy or trabeculotomy) is the mainstay, not drops alone.

Why the other options are wrong:

- A, congenital cataract: gives a white pupil (leukocoria) without a large watery photophobic eye.
- C, retinoblastoma: presents with leukocoria or squint, not corneal enlargement.
- D, ophthalmia neonatorum: is a neonatal purulent conjunctivitis, not an enlarged cornea.

Final Answer: Congenital glaucoma (buphthalmos) $\Rightarrow$ **B**

Answer: (B) [Go Back to Q5](#)



Q6.

Solution

Concept – phacomorphic glaucoma: A lens-induced secondary angle-closure glaucoma caused by a swollen (intumescent) cataractous lens.

Step 1 – read the mechanism: The **intumescent swollen lens** pushes the iris forward, **closing the drainage angle** and raising pressure in an eye with a long-standing cataract; this is phacomorphic glaucoma.

Step 2 – management: Pressure is first lowered medically, then **cataract extraction** relieves the mechanical cause.

Why the other options are wrong:

- A, primary open-angle glaucoma: is chronic and painless with an open angle, not a swollen lens.
- B, congenital glaucoma: occurs in infants, not elderly cataract patients.
- D, neovascular glaucoma: is driven by iris new vessels (for example after diabetic ischaemia), not a swollen lens.

Final Answer: Phacomorphic glaucoma $\Rightarrow$ C

Answer: (C) [Go Back to Q6](#)

Q7.

Solution

Concept – rhegmatogenous retinal detachment: A retinal break lets fluid pass under the retina and separate it from the underlying pigment epithelium.

Step 1 – read the classic story: **Flashes** (photopsiae), a **shower of new floaters** and then a **curtain** descending over the field, especially in a myope, define rhegmatogenous retinal detachment.

Step 2 – why it is urgent: Once the macula detaches, central vision is lost, so prompt surgical reattachment (buckle, vitrectomy or pneumatic retinopexy) is needed.

Why the other options are wrong:

- A, central serous retinopathy: gives central blurring and micropsia, not flashes and a curtain.
- B, vitreous haemorrhage: gives sudden floaters and haze but not a fixed rising curtain from a detachment.



- C, optic neuritis: gives painful central visual loss, not flashes, floaters and a curtain.

Final Answer: Rhegmatogenous retinal detachment ⇒ D

Answer: (D) [Go Back to Q7](#)

Q8.

Solution

Concept – age-related macular degeneration (AMD): AMD is a degenerative disease of the macula and the leading cause of central visual loss in the elderly.

Step 1 – read the fundus: Gradual loss of **central** vision with **distortion of straight lines** (metamorphopsia) and yellowish **drusen** at the macula (marked X) indicate AMD.

Step 2 – the two types: Dry (atrophic) AMD progresses slowly; wet (neovascular) AMD causes rapid loss and is treated with anti-VEGF injections.

Why the other options are wrong:

- A, open-angle glaucoma: causes *peripheral* field loss, not central distortion with drusen.
- B, central retinal artery occlusion: causes *sudden* painless total loss with a cherry-red spot, not gradual central loss.
- D, retinitis pigmentosa: causes night blindness and peripheral field loss with bone-spicule pigment, not macular drusen.

Final Answer: Age-related macular degeneration ⇒ C

Answer: (C) [Go Back to Q8](#)

Q9.

Solution

Concept – optic neuritis: Optic neuritis is an inflammatory demyelination of the optic nerve, strongly linked to multiple sclerosis.

Step 1 – match the triad: Subacute **unilateral** visual loss, **pain on eye movement** and a **relative afferent pupillary defect** in a young woman define optic neuritis.

Step 2 – the association: It is often the first demyelinating event of multiple sclerosis; magnetic resonance imaging and neurology referral follow, and most



vision recovers.

Why the other options are wrong:

- B, papilloedema: is *bilateral* disc swelling from raised intracranial pressure with preserved early vision and no pain on movement.
- C, optic atrophy: is a pale flat disc from established nerve loss, not an acute painful episode.
- D, central serous retinopathy: is a painless macular condition of young men, without a pupil defect.

Final Answer: Optic neuritis $\Rightarrow$ A

Answer: (A) [Go Back to Q9](#)

Q10.

Solution

Concept – hypermetropia: In hypermetropia the eye is too weak or too short, so the image forms behind the retina.

Step 1 – read the ray diagram: Parallel rays focus at **X**, *behind* the retina, which defines **hypermetropia** (long-sightedness).

Step 2 – the correction: A **convex (plus, converging) lens** adds power and brings the focus forward onto the retina.

Why the other options are wrong:

- A, myopia: focuses *in front* of the retina and needs a concave lens.
- B, emmetropia: focuses exactly on the retina and needs no correction.
- C, astigmatism: has two focal lines and needs a cylindrical lens.

Final Answer: Hypermetropia, corrected with a convex lens $\Rightarrow$ D

Answer: (D) [Go Back to Q10](#)

Q11.

Solution

Concept – third (oculomotor) nerve palsy: The third nerve supplies most extraocular muscles, the levator of the lid and the pupil sphincter.

Step 1 – read the signs: **Ptosis** (marked **X**), an eye deviated '**down and out**' (unopposed lateral rectus and superior oblique) and a **dilated pupil** define a third



nerve palsy.

Step 2 – why the pupil matters: A dilated ('blown') pupil suggests a surgical, compressive cause such as a posterior communicating artery aneurysm, which is an emergency.

Why the other options are wrong:

- A, fourth nerve: palsy causes vertical diplopia with a head tilt, not ptosis and a down-and-out eye.
- B, sixth nerve: palsy causes a convergent squint with failure of abduction, not ptosis.
- C, facial nerve: palsy causes failure to *close* the lid, not ptosis with a down-and-out dilated eye.

Final Answer: Third (oculomotor) nerve palsy ⇒ D

Answer: (D) [Go Back to Q11](#)

Q12.

Solution

Concept – chalazion: A chalazion is a chronic sterile lipogranuloma of a blocked meibomian gland in the tarsal plate.

Step 1 – match the description: A **painless**, firm, slowly growing **tarsal** nodule from a blocked meibomian gland is a chalazion.

Step 2 – management: Small ones may resolve with warm compresses; persistent ones need incision and curettage from the tarsal (inner) surface.

Why the other options are wrong:

- B, sty (external hordeolum): is an acute *painful* tender abscess of a lash follicle at the lid margin.
- C, basal cell carcinoma: is a slowly growing ulcerated lid-margin tumour with rolled pearly edges, not a tarsal lipogranuloma.
- D, acute dacryocystitis: is a painful swelling at the medial canthus, not a tarsal nodule.

Final Answer: Chalazion ⇒ A

Answer: (A) [Go Back to Q12](#)



Q13.

Solution

Concept – acute dacryocystitis: Obstruction of the nasolacrimal duct lets tears and organisms stagnate in the lacrimal sac and become infected.

Step 1 – read the signs: A tender, red **swelling at the medial canthus** (marked X), watering, and **pus regurgitating** through the punctum on pressure, with a **blocked nasolacrimal duct**, define acute dacryocystitis.

Step 2 – management: Systemic antibiotics and warm compresses settle the acute attack; definitive treatment is a dacryocystorhinostomy to bypass the block.

Why the other options are wrong:

- A, chalazion: is a painless nodule in the tarsal plate of the lid, not at the medial canthus.
- B, orbital cellulitis: gives proptosis and painful restricted eye movements, not a localised medial-canthal sac swelling.
- D, sty: is a tender abscess at the lid margin around a lash, not over the lacrimal sac.

Final Answer: Acute dacryocystitis ⇒

Answer: (C) [Go Back to Q13](#)

Q14.

Solution

Concept – retinopathy of prematurity (ROP): ROP is an abnormal retinal vascular proliferation in preterm infants, aggravated by supplemental oxygen.

Step 1 – read the clues: A **preterm, low-birth-weight** infant with an **oxygen** history developing **neovascularisation** at the vascular-avascular junction of the peripheral retina indicates ROP.

Step 2 – screening and treatment: At-risk babies are screened; advanced disease is treated with laser photocoagulation or anti-VEGF to prevent tractional detachment.

Why the other options are wrong:

- A, retinoblastoma: presents with leukocoria and a calcified mass, not peripheral neovascularisation with an oxygen history.
- B, congenital cataract: is a lens opacity causing leukocoria, not a retinal vascular disease.



- D, persistent hyperplastic primary vitreous: is a congenital retrolental fibrovascular remnant in a full-term microphthalmic eye, not oxygen-related peripheral neovascularisation.

Final Answer: Retinopathy of prematurity $\Rightarrow$ C

Answer: (C) [Go Back to Q14](#)

Q15.

Solution

Concept – traumatic hyphaema: Blunt ocular trauma can tear iris or ciliary vessels, letting blood collect in the anterior chamber.

Step 1 – name the sign: Blood settling with a horizontal level in the anterior chamber after blunt trauma is a **hyphaema**.

Step 2 – management principle: Rest with the head elevated (so blood settles inferiorly and clears the visual axis) and avoidance of strenuous activity reduce the risk of a secondary rebleed; intraocular pressure is monitored.

Why the other options are wrong:

- A, hypopyon: is a collection of *pus*, not blood, and is not treated as a traumatic bleed.
- C, endophthalmitis: is intraocular infection needing vitreous tap and antibiotics, not a settled blood level from trauma.
- D, subconjunctival haemorrhage: is blood *under the conjunctiva*, not inside the anterior chamber.

Final Answer: Hyphaema, rest with head elevated $\Rightarrow$ B

Answer: (B) [Go Back to Q15](#)



Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	B	2	A	3	A	4	B	5	B
6	C	7	D	8	C	9	A	10	D
11	D	12	A	13	C	14	C	15	B

