

INI CET Ophthalmology

Sample Paper – 1

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 corneal ulcer is accompanied by a sterile collection of pus that settles with a horizontal fluid level in the anterior chamber. This finding is called:
- (A) Hyphaema
(B) Keratic precipitates
(C) Hypopyon
(D) Cotton-wool spots
- Q2.** Acute mucopurulent conjunctivitis, with sticky discharge, diffuse conjunctival redness that is greater away from the cornea and a normal pupil, is most commonly caused by:



- (A) Bacterial infection (for example Staphylococcus or Streptococcus)
- (B) A type I allergic reaction
- (C) Raised intraocular pressure
- (D) An early cataract

Q3. The leading infective cause of preventable blindness worldwide, caused by Chlamydia trachomatis and controlled by the WHO 'SAFE' strategy, is:

- (A) Vernal keratoconjunctivitis
- (B) Fungal keratitis
- (C) Trachoma
- (D) Episcleritis

Lens and Glaucoma

Q4. The commonest cause of reversible (curable) blindness worldwide, treated by phacoemulsification with an intraocular lens implant, is:

- (A) Cataract
- (B) Primary open-angle glaucoma
- (C) Diabetic retinopathy
- (D) Optic atrophy

Q5. Primary open-angle glaucoma characteristically presents with:

- (A) A sudden painful red eye with coloured haloes
- (B) Painless gradual loss of the peripheral field with an increased cup-to-disc ratio
- (C) Sudden total painless loss of vision
- (D) Binocular double vision

Q6. A patient presents with a sudden painful red eye, coloured haloes around lights, a mid-dilated fixed oval pupil and a stony-hard eyeball. The diagnosis is:



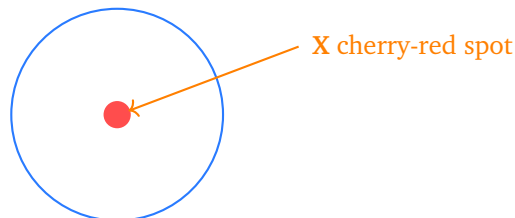
- (A) Primary open-angle glaucoma
- (B) Allergic conjunctivitis
- (C) Central serous retinopathy
- (D) Acute angle-closure glaucoma

Retina and Vitreous

Q7. The earliest ophthalmoscopic sign of diabetic retinopathy is:

- (A) Retinal neovascularisation
- (B) Microaneurysms
- (C) Tractional retinal detachment
- (D) Optic disc cupping

Q8. The fundus below shows a pale retina with a 'cherry-red spot' at the macula (marked X) in a patient with sudden painless total loss of vision. This indicates:



- (A) Vitreous haemorrhage
- (B) Primary open-angle glaucoma
- (C) Mature cataract
- (D) Central retinal artery occlusion

Neuro-ophthalmology and Optics

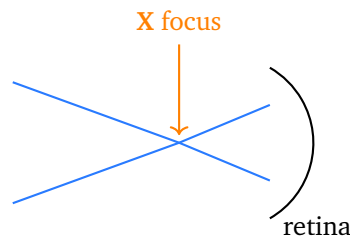
Q9. Bilateral optic disc swelling with blurred disc margins caused by raised intracranial pressure is termed:

- (A) Optic atrophy
- (B) Optic neuritis



- (C) Papilloedema
- (D) Central serous retinopathy

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



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

Q11. A lesion at the optic chiasma, such as a pituitary tumour compressing the crossing nasal fibres, classically produces:

- (A) Complete blindness of one eye
- (B) Homonymous hemianopia
- (C) Bitemporal hemianopia
- (D) An isolated central scotoma

Uvea, Orbit and Ocular Adnexa

Q12. A child develops fever, proptosis, painful restricted eye movements and lid swelling a few days after acute ethmoid sinusitis. The most likely diagnosis is:

- (A) Allergic conjunctivitis
- (B) Chalazion
- (C) Stye (external hordeolum)



(D) Orbital cellulitis

Q13. A painful red eye with photophobia, a small (miotic) pupil, circum-corneal congestion and keratic precipitates on the corneal endothelium indicates:

- (A) Anterior uveitis (iridocyclitis)
- (B) Acute bacterial conjunctivitis
- (C) Immature cataract
- (D) Primary open-angle glaucoma

Paediatric Ophthalmology and Emergencies

Q14. A 2-year-old presents with leukocoria (a white pupillary reflex) and a calcified intraocular mass on ultrasound, associated with the RB1 gene. The most likely diagnosis is:

- (A) Congenital cataract
- (B) Retinoblastoma
- (C) Retinopathy of prematurity
- (D) Vitreous haemorrhage

Q15. The immediate first-aid management of an alkali chemical splash to the eye is:

- (A) Patch the eye and review the next day
- (B) Copious immediate irrigation with water or normal saline
- (C) Apply a steroid ointment only
- (D) Instil atropine and observe



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

Concept – pus in the anterior chamber: Inflammatory cells can settle in the anterior chamber and form a visible level.

Step 1 – name the sign: A sterile collection of white cells settling with a horizontal fluid level in the anterior chamber is a **hypopyon**.

Step 2 – the context: It accompanies severe corneal ulcers (a hypopyon corneal ulcer) and endophthalmitis.

Why the other options are wrong:

- A, hyphaema: is *blood* in the anterior chamber, usually after trauma.
- B, keratic precipitates: are inflammatory deposits on the corneal endothelium, seen in uveitis.
- D, cotton-wool spots: are retinal nerve-fibre infarcts, not an anterior chamber finding.

Final Answer: Hypopyon ⇒

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

Q2.**Solution**

Concept – acute mucopurulent conjunctivitis: The type of discharge points to the cause of a red eye.

Step 1 – read the clues: Sticky mucopurulent discharge, diffuse redness greater in the fornices (away from the cornea) and a normal pupil indicate a **bacterial** conjunctivitis.

Step 2 – management: Topical broad-spectrum antibiotics and hygiene measures clear most cases.

Why the other options are wrong:

- B, allergy: gives watery discharge and itching, not sticky pus.
- C, raised intraocular pressure: causes a painful eye with haloes, not a discharging one.
- D, cataract: is a painless gradual loss of vision, not a red discharging eye.



Final Answer: Bacterial infection $\Rightarrow$ A

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

Q3.

Solution

Concept – trachoma: Trachoma is a chronic chlamydial keratoconjunctivitis and a major global blinding disease.

Step 1 – name the disease: Caused by **Chlamydia trachomatis** and tackled by the WHO 'SAFE' strategy (Surgery, Antibiotics, Facial cleanliness, Environmental improvement), it is trachoma.

Step 2 – the mechanism of blindness: Repeated infection scars the conjunctiva, causing entropion and trichiasis that abrade the cornea.

Why the other options are wrong:

- A, vernal keratoconjunctivitis: is an allergic disease of young boys, not infective blindness.
- B, fungal keratitis: is a corneal infection, not the leading global blinding conjunctival disease.
- D, episcleritis: is a benign self-limiting inflammation.

Final Answer: Trachoma $\Rightarrow$ C

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

Q4.

Solution

Concept – cataract as reversible blindness: Blindness is classed as reversible or irreversible by whether treatment restores sight.

Step 1 – name the cause: **Cataract** is the commonest cause of reversible blindness worldwide, cured by removing the opaque lens and implanting an intraocular lens.

Step 2 – the technique: Phacoemulsification with a foldable intraocular lens is the standard modern operation.

Why the other options are wrong:

- B, glaucoma: causes *irreversible* optic nerve damage.



- C, diabetic retinopathy: causes largely irreversible retinal damage.
- D, optic atrophy: is permanent nerve loss.

Final Answer: Cataract $\Rightarrow$ A

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

Q5.

Solution

Concept – primary open-angle glaucoma (POAG): POAG is a chronic, silent optic neuropathy with an open drainage angle.

Step 1 – match the presentation: It causes **painless, gradual loss of the peripheral field** with an enlarging cup-to-disc ratio; central vision is lost last.

Step 2 – why it is dangerous: Because it is painless and peripheral, it is often detected late, hence the value of screening intraocular pressure and the disc.

Why the other options are wrong:

- A, painful red eye with haloes: describes acute angle-closure glaucoma.
- C, sudden total painless loss: suggests a vascular occlusion, not chronic glaucoma.
- D, double vision: is a motility or neurological problem.

Final Answer: Painless peripheral field loss with a raised cup-disc ratio $\Rightarrow$ B

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

Q6.

Solution

Concept – acute angle-closure glaucoma: A sudden block of aqueous drainage causes a rapid, dangerous rise in pressure.

Step 1 – read the signs: A sudden **painful red eye**, coloured haloes, a mid-dilated fixed oval pupil and a stony-hard globe define acute angle-closure glaucoma.

Step 2 – urgency: It is an emergency needing prompt pressure-lowering to save vision, followed by laser iridotomy.

Why the other options are wrong:

- A, open-angle glaucoma: is painless and gradual.
- B, allergic conjunctivitis: is itchy and not sight-threatening.



- C, central serous retinopathy: causes painless blurring, not a hard red eye.

Final Answer: Acute angle-closure glaucoma ⇒ D

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

Q7.

Solution

Concept – earliest sign of diabetic retinopathy: Diabetic retinopathy progresses through recognisable fundus stages.

Step 1 – name the earliest change: Microaneurysms, tiny outpouchings of retinal capillaries, are the first visible sign.

Step 2 – the progression: Later changes include dot-and-blot haemorrhages, hard exudates and, in proliferative disease, neovascularisation.

Why the other options are wrong:

- A, neovascularisation: is a *late* proliferative feature.
- C, tractional detachment: is an advanced complication.
- D, disc cupping: is a sign of glaucoma, not early diabetic retinopathy.

Final Answer: Microaneurysms ⇒ B

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

Q8.

Solution

Concept – central retinal artery occlusion (CRAO): Sudden loss of the retinal arterial supply causes profound painless visual loss.

Step 1 – read the fundus: A pale, oedematous retina with a **cherry-red spot** at the macula (marked X) is the hallmark of CRAO.

Step 2 – why the cherry-red spot: The thin foveal retina still shows the underlying choroidal circulation, standing out red against the pale ischaemic retina.

Why the other options are wrong:

- A, vitreous haemorrhage: causes floaters and a hazy fundus view, not a cherry-red spot.
- B, open-angle glaucoma: causes gradual field loss, not sudden loss with this sign.



- C, cataract: is a gradual painless blur without a fundus lesion.

Final Answer: Central retinal artery occlusion $\Rightarrow$ D

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

Q9.

Solution

Concept – papilloedema: Raised intracranial pressure is transmitted along the optic nerve sheath to the disc.

Step 1 – define it: **Papilloedema** is *bilateral* optic disc swelling with blurred margins due to raised intracranial pressure.

Step 2 – the distinction: Vision is usually preserved early (unlike optic neuritis), with an enlarged blind spot.

Why the other options are wrong:

- A, optic atrophy: is a pale, *flat* disc from nerve loss.
- B, optic neuritis: is usually unilateral with early visual loss and pain on eye movement.
- D, central serous retinopathy: is a macular, not a disc, condition.

Final Answer: Papilloedema $\Rightarrow$ C

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

Q10.

Solution

Concept – myopia: In myopia the eye is too powerful or too long for its focal length.

Step 1 – read the ray diagram: Parallel rays focus at **X**, *in front of* the retina, which defines **myopia** (short-sightedness).

Step 2 – the correction: A **concave (minus, diverging) lens** moves the focus back onto the retina.

Why the other options are wrong:

- B, hypermetropia: focuses behind the retina and needs a convex lens.
- C, emmetropia: focuses exactly on the retina and needs no correction.
- D, astigmatism: has two focal lines and needs a cylindrical lens.



Final Answer: Myopia, corrected with a concave lens $\Rightarrow$ **A**

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

Q11.

Solution

Concept – chiasmal visual field defect: The crossing fibres at the chiasma carry the nasal retina (temporal fields).

Step 1 – localise the lesion: A midline chiasmal lesion (classically a **pituitary tumour**) compresses the crossing nasal fibres, cutting out both *temporal* fields.

Step 2 – name the defect: This gives a **bitemporal hemianopia**.

Why the other options are wrong:

- A, monocular blindness: results from an optic nerve lesion before the chiasma.
- B, homonymous hemianopia: results from a lesion behind the chiasma (optic tract or radiation).
- D, central scotoma: is a macular or optic nerve problem.

Final Answer: Bitemporal hemianopia $\Rightarrow$ **C**

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

Q12.

Solution

Concept – orbital cellulitis: Infection can spread from the ethmoid sinuses into the orbit through the thin lamina papyracea.

Step 1 – read the signs: Fever, **proptosis**, painful restricted eye movements and lid swelling after sinusitis define orbital cellulitis.

Step 2 – why it matters: It is an emergency (risk of optic nerve compromise and cavernous sinus thrombosis) needing intravenous antibiotics and imaging.

Why the other options are wrong:

- A, allergic conjunctivitis: is itchy and non-tender without proptosis.
- B, chalazion: is a painless meibomian cyst.
- C, styte: is a small tender lid-margin abscess, not orbital.

Final Answer: Orbital cellulitis $\Rightarrow$ **D**



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

Q13.

Solution

Concept – anterior uveitis (iridocyclitis): Inflammation of the iris and ciliary body gives a distinct red-eye pattern.

Step 1 – match the signs: Pain, photophobia, a **small (miotic) pupil**, circum-corneal (ciliary) congestion and keratic precipitates point to anterior uveitis.

Step 2 – management: Topical steroids and a cycloplegic (to prevent posterior synechiae) are the mainstay.

Why the other options are wrong:

- B, bacterial conjunctivitis: has discharge, a normal pupil and no photophobia.
- C, cataract: is painless with a white pupil, not a red inflamed eye.
- D, open-angle glaucoma: is painless with a normal-reacting pupil.

Final Answer: Anterior uveitis ⇒ **A**

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

Q14.

Solution

Concept – retinoblastoma: Retinoblastoma is the commonest primary intraocular malignancy of childhood.

Step 1 – read the clues: **Leukocoria** (white pupillary reflex), a calcified intraocular mass on ultrasound and the RB1 gene point to retinoblastoma.

Step 2 – why calcification helps: Intraocular calcification on ultrasound is highly suggestive and helps distinguish it from other causes of leukocoria.

Why the other options are wrong:

- A, congenital cataract: causes leukocoria but has no calcified mass or RB1 link.
- C, retinopathy of prematurity: occurs in preterm infants with an oxygen history, not a calcified mass.
- D, vitreous haemorrhage: gives a dark, not white, reflex.



Final Answer: Retinoblastoma $\Rightarrow$ B

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

Q15.

Solution

Concept – chemical eye injury: An alkali burn keeps penetrating the eye until the chemical is removed.

Step 1 – name the first step: **Immediate copious irrigation** with water or normal saline is the single most important first-aid measure, before anything else.

Step 2 – why urgency matters: Alkalis cause liquefactive necrosis and penetrate deeply, so every second of delay worsens damage; irrigate until the pH normalises.

Why the other options are wrong:

- A, patch and review: dangerously delays removal of the chemical.
- C, steroid only: does not remove the chemical and is not the first step.
- D, atropine and observe: ignores the ongoing chemical injury.

Final Answer: Copious immediate irrigation $\Rightarrow$ B

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



Answer Key

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

