

Master Copy

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (OPHTHALMOLOGY) OPTICS & REFRACTION EXAMINATION
APRIL 2026

Date: 29th April 2026

Time: 1.30 p.m. - 3.30 p.m.

ESSAY PAPER

Answer **all four (04)** questions.

Answer each question in a **separate book**.

1. A 32-year-old man presents with blurred vision. He has a history of corneal laceration repair following a tennis ball injury 8 months ago. His visual acuity in the right eye is 6/24, improving to 6/9 with pinhole and in the left eye is 6/6. His retinoscopy shows an irregular scissor reflex in the right eye and a normal reflection in the left eye. Fundal examination is unremarkable in both eyes.

Subjective refraction is:

Right eye: **-1.00 / -4.00 × 35 → 6/9**

Left eye: **Plano / -0.50 × 180 → 6/6**

Near vision: **N5**

- 1.1. List the causes of the above refractive findings. (20%)
1.2. How would you assess this patient? (40%)
1.3. Briefly discuss the management of this patient. (40%)

2.

- 2.1. Describe the optics of operating microscope with a ray diagram. (70%)
2.2. State additional features of operating microscopes which are important in ophthalmic surgeries. (30%)

3. A 16-year-old G. C. E. (O/L) student is referred to a low vision clinic with the best corrected right eye visual acuity of 6/36 and left eye of 6/60.

- 3.1. Briefly explain how you would evaluate this patient. (40%)
3.2. Give a summary of management of this patient. (30%)
3.3. List the optical low vision devices. (30%)

4. Write short notes on the following.

- 4.1. Depth of focus and depth of field (30%)
4.2. Effective Lens Position (40%)
4.3. Stereoacuity (30%)

