

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (OPHTHALMOLOGY) OPTICS & REFRACTION EXAMINATION
APRIL 2022

Date:- 26th April 2022

Time:- 1.30 p.m. – 3.30 p.m.

ESSAY PAPER

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

Answer each question in a separate book.

1.

- 1.1. What is total internal reflection (explain your answer with ray diagram). (40%)
- 1.2. List the ophthalmic instruments and equipment where the principle of total internal reflection is used. (20%)
- 1.3. Explain the optics of gonioscopy with a ray diagram. (40%)

2. A 46-year-old teacher who has worn spectacles for several years before, presented to you complaining of difficulty in using her newly prescribed spectacles.

- 2.1. List the possible causes you would consider in finding the reasons for her problem. (50%)
- 2.2. Enumerate the other options you would consider if the patient is not happy to continue wearing spectacles. (20%)
- 2.3. Briefly discuss the optics of progressive addition lenses. (30%)

Contd...../2-

3. A 28-year-old patient with emmetropia in one eye and -15D myopia in the other eye comes to you for treatment.
 - 3.1. Enumerate treatment options available. (30%)
 - 3.2. What tests and investigations would you perform before deciding on the treatment? (30%)
 - 3.3. Discuss advantages and disadvantages of your treatment options. (40%)

4. Write short notes on
 - 4.1. Accommodative insufficiency. (30%)
 - 4.2. The management options for anisometropia in children. (30%)
 - 4.3. Therapeutic laser tissue interaction types used in ophthalmology. (40%)