

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (OPHTHALMOLOGY) OPHTHALMIC BASIC SCIENCES
EXAMINATION – MARCH 2021

Date:- 24th March 2021

Time:- 1.00 p.m. – 2.30 p.m.

STRUCTURED ESSAY PAPER I

Answer all three (03) questions.

Answer each question in a separate book (Question 1, 2 and 3.1 and 3.2)

1.

- 1.1. Describe the anatomy of the normal crystalline lens. (60%)
- 1.2. Give a brief account on its development. (25%)
- 1.3. List the development defects of the lens. (15%)

2.

- 2.1. Give an account on the macroscopic and microscopic structure of the lacrimal gland. (60%)
- 2.2. Outline the blood supply, nerve supply and lymphatic drainage of the above. (25%)
- 2.3. Briefly outline the clinical importance of this gland. (15%)

3.

3.1.

- 3.1.1. Compare CT brain with MRI brain. (30%)
- 3.1.2. List other radiological modalities that you would recommend for the diagnosis of neuro-ophthalmological conditions. (10%)
- 3.1.3. Outline contraindications for the MRI of the brain. (10%)

3.2. Discuss the following:

- 3.2.1. Formation of a ring chromosome and resultant phenotype in humans. (20%)
- 3.2.2. Characteristics of a pedigree with autosomal dominant inheritance. (30%)

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Date:- 24th March 2021

Time:- 3.00 p.m. – 4.30 p.m.

STRUCTURED ESSAY PAPER II

Answer all three (03) questions.

Answer each question in a separate book (Question 1, 2, 3.1. and 3.2)

1.

- 1.1. What are the physiological functions of the retinal pigment epithelium? (60%)
- 1.2. Write a brief account on the Electrooculogram (EOG). (30%)
- 1.3. Explain the importance of the retinal pigment epithelium in clinical practice. (10%)

2. Write short notes on the physiological basis of

- 2.1. Pannum fusional space. (50%)
- 2.2. Saccadic eye movements. (50%)

Contd/2-

3.

- 3.1. Randomised controlled trial was conducted to establish whether initial treatment with selective laser trabeculoplasty (SLT) is superior to initial treatment with topical medication for primary open-angle glaucoma (POAG).

The trial comprised two treatment arms: initial SLT followed by conventional medical therapy as required, and medical therapy without laser therapy. Participants were followed up for 3 years. The primary outcome measure was health-related quality of life (HRQL). Analysis was performed on an intention-to-treat basis.

- 3.1.1. Briefly explain how you would randomize the sample into two arms. (10%)
- 3.1.2. What is meant by primary outcome? (10%)
- 3.1.3. What is the purpose of analyzing data according to intention-to-treat basis? (10%)
- 3.1.4. Outline a plan for statistical analysis of the primary outcome. (20%)

- 3.2. A 50-year-old man presented to the Eye Hospital with proptosis of the right eye of 6 months duration. Radiological investigations revealed a mass lesion in periorbital tissue.

- 3.2.1. List the differential diagnoses. (10%)
- 3.2.2. List the sequence of laboratory investigation that you perform to arrive at a diagnosis. (10%)
- 3.2.3. Discuss the standard procedures of sending cytology and histology samples to the laboratory. (30%)