



POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (OPHTHALMOLOGY) OPHTHALMIC BASIC SCIENCES
EXAMINATION – MARCH 2022

Date: 30th March 2022

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, 3.1 and 3.2)

1.

1.1. Describe the macroscopic and microscopic structure of the cornea. (80%)

1.2. Briefly discuss the value of specular microscopy. (20%)

2.

2.1. Describe the anatomy of the orbital floor including its relationships. (80%)

2.2. How would you explain the vertical diplopia following blunt trauma to the orbit?
(20%)

3.

3.1.

3.1.1. Outline three (03) potential adverse effects of iodinated contrast agents in neuroimaging. (10%)

3.1.2. Briefly describe the precaution you would take to prevent adverse effects mentioned in 3.1.1. (20%)

3.1.3. Compare computed tomography (CT) with positron emission tomography (PET) images. (20%)

3.2.

3.2.1. Draw a diagram of a chromosome indicating the centromere, telomere, p and q arms. State the phase of the cell cycle in which chromosome testing (karyotyping) is performed. (10%)

3.2.2. State the characteristic of an acrocentric chromosome. (5%)

3.2.3. Outline the structural difference between a balanced reciprocal and a Robertsonian translocation. (15%)

3.2.4. Outline the reproductive outcomes for a male carrier of a Robertsonian translocation. (20%)

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EXAMINATION – MARCH 2022

Date: 30th March 2022

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. Briefly describe the visual field defects associated with lesions of the visual pathway. (60%)

1.2. What are the factors affecting visual acuity? (40%)

2.

2.1.

2.1.1. Describe the blinking mechanism. (30%)

2.1.2. What are the conditions which affect blinking? (20%)

2.2. Describe the aging changes of the vitreous. (50%)

3.

3.1. A researcher wants to conduct a systematic review to assess the efficacy and safety of topical pharmacological therapies versus placebo for adults with Epidemic keratoconjunctivitis.

3.1.1. Briefly describe the principles of searching primary studies for a systematic review. (15%)

3.1.2. List four (04) criteria that assess risk of bias of the primary studies. (20%)

3.1.3 Briefly describe the principles of meta-analysis. (15%)

3.2. Writes notes on

3.2.1. Cytological investigation techniques use in ophthalmic practice. (30%)

3.2.2. Immunohistochemistry application in ophthalmic practice giving scientific basis of immunohistochemistry technique. (20%)