POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (OPHTHALMOLOGY) OPHTHALMIC BASIC SCIENCES EXAMINATION – MARCH 2019

Date:- 13th March 2019 **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 1,2,3.1and 3.2)

1.

1.1. Describe the gross and microscopic anatomy of the retina and its blood supply. (80%)

1.2. Outline the development of the retina. (20%)

2.

2.1. Describe the blood supply to the orbit and its contents via the ophthalmic branch of the internal carotid artery. (80%)

2.2. Describe the arterial anastomoses between branches of internal and external carotid vessels in and around the orbit. (20%)

3.

3.1. A 60-year-old female patient who presented to the eye clinic with bitemporal hemianopia suspected to have the lesion in the region of optic chiasm.

3.1.1. List the imaging investigations you would order in this patient to arrive at a diagnosis. (10%)

3.1.2. Discuss with reasons the best imaging modality out of all you mentioned above. (20%)

3.1.3. Explain giving reasons the preparation of this patient for that investigation prior to sending to Radiology Department on due date and time. (20%)

Contd..../2-

3.2. A 30-year-old man is investigated for infertility. His karyotype is 47XXY.

3.2.1. State the diagnosis. (05%)

3.2.2. Briefly outline the genetic mechanism that gives rise to this chromosomal abnormality. (30%)

3.2.3. Explain why this abnormality is tolerated better than a similar sized chromosome abnormality in an autosome (numbered chromosome). (15%)

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Date:- 13th March 2019 **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, 3.1and 3.2)

1. Compare and contrast corneal epithelium and endothelium with regards to composition and functions. (100%)

2.
   2.1. Write notes on blood-ocular barriers in the eye. (50%)

   2.2. Explain the importance of the ocular barrier in clinical practice. (50%)

3.
   3.1. The following paragraph was extracted from a journal article.

   "A study group included 50 eyes of 50 patients (mean age: 73.2±7.6 years) undergoing repeat Descemet membrane endothelial keratoplasty (DMEK) surgery for corneal decompensation after primary DMEK. The control group consisted of 50 eyes of 50 patients (mean age: 60.8±11.6 years) with successful primary DMEK. The main outcome variable was corrected distance visual acuity (CDVA) after six months of primary DMEK. All data were extracted from the previous Bed Head Tickets and Clinical Records. At 6 months, the mean (standard deviation) CDVA values were 0.49±0.35 for repeat DMEK group and 0.40±0.36 primary DMEK group, the deference was not statistically significant."

   3.1.1. What is the study design? (10%)

   3.1.2. How would you assess the validity of the results? (30%)

   3.1.3. How would you plan further application of statistical methods to improve the validity of the results? (10%)

Contd…/2-

3.2.

3.2.1. List the ophthalmic condition which require cytological diagnosis. (10%)

3.2.2. Discuss the cytological techniques used in the above conditions. (30%)

3.2.3. Give the steps to be taken by the clinical staff (pre-analytical steps) to obtain accurate, complete and timely report from the laboratory in the above mentioned cytological tests. (10%)