

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**NOVEMBER, 1991**

Date: 27<sup>th</sup> November 1991

Time: 2.00 p.m.- 5.00 p.m.

**ESSAY PAPER**

**Answer all questions.**

**Answer each part in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Describe the histological structure of the retina. How does it differ in the various regions? Describe its development.
2. Give an account of the anatomy of the pituitary gland (Hypophysis cerebri). Briefly describe its development.

**PART B**  
**(PHYSIOLOGY)**

1. Discuss the basis of the measurement of visual acuity. What factors affect visual acuity?
2. Discuss the role of the kidney in the maintenance of the constancy of the internal environment.

**PART C**  
**(PATHOLOGY)**

1. Write notes on,
  - 1.1 The delayed hypersensitivity reaction.
  - 1.2 The different types of herpes viruses and -their mode of action.
  - 1.3 The pathological appearances of basal cell carcinoma.
  - 1.4 The different varieties of chemical disinfectants and their uses.
2. Explain the meaning of the term suppuration. Discuss the pathogenesis of suppuration and indicate the pathological change sequelae and complications of suppuration.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**  
**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**MAY, 1992**

Date: 26<sup>th</sup> May 1992

Time: 2.00 p.m. - 5.00 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**  
**Answer each part in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Write an essay on the autonomic nerve supply of the eye and adnexae.
2. Give an account of the anatomy of the paranasal sinuses.

**PART B**  
**(PHYSIOLOGY)**

1. What is the composition of aqueous humor?  
Discuss the physiology of aqueous humor production.
2. Discuss the functions of the cerebellum.

**PART C**  
**(PATHOLOGY)**

1. Discuss the effects of prolonged recumbency.
2. Discuss the advantages and disadvantages of an acute inflammatory exudate.

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**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**SEPTEMBER, 1992**

Date: 21<sup>st</sup> September 1992

Time: 2.00 p.m.- 5.00 p.m.

**ESSAY PAPER**

**Answer all questions.**

**Answer each part in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Give an account of the lacrimal gland including its relations and histology.
2. Give an account of the lateral wall of the nose.

**PART B**  
**(PHYSIOLOGY)**

1. Discuss the supra nuclear control of horizontal version and vergence movements.
2. Discuss the haemostatic and fibrinolytic mechanisms in Man.

**PART C**  
**(PATHOLOGY)**

1. Write an essay on the role of the lymphocyte in the immune reaction.
2. Write notes on,
  - 2.1 Chemical carcinogens
  - 2.2 Hematological abnormalities produced by malignant tumors
  - 2.3 Cardiac oedema.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**MAY, 1993**

Date: 24<sup>th</sup> May 1993

Time: 2.00 p.m.- 5.00 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**  
**Answer each part in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Describe the anatomy of the intraocular muscles of the eye. Add a note on its development.
2. Give the central connections, course, relations and the structures supplied by the ophthalmic and mandibular divisions of the trigeminal nerve.

**PART B**  
**(PHYSIOLOGY)**

1. What is aqueous humor? How is it produced and drained? Discuss the mode and site of action of the pharmacological preparations used in the control of production and drainage of aqueous.
2. Discuss the physiology of hydrogen ion regulation in a healthy person. Describe briefly how this may be changed in renal failure.

**PART C**  
**(PATHOLOGY)**

1. Write notes on ,
  - 1.1 Tumor markers
  - 1.2 Pathogenesis of cysts.
2.
  - 2.1 Discuss the pathogenesis of increase of fibrous tissue in an organs
  - 2.2 List the pathological effects of fibrosis.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**SEPTEMBER, 1993**

Date: 6<sup>th</sup> September 1993

Time: 2.00 p.m. - 5.00 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C,  
Answer each part in separate answer books.**

**PART A  
(ANATOMY)**

1. Describe the arrangement of the veins in the head and neck (excluding brain)
2. Give an account of the orbital-part of the optic nerve including the nerve fibre arrangements and the blood supply

**PART B  
(PHYSIOLOGY)**

1. Write short notes on each of the following
  - (a) Factors affecting visual acuity
  - (b) Dark adaptation
  - (c) Functions of pigment epithelium of the eye
2. Describe the immune mechanisms mediated by leucocytes of the blood in the adult.

**PART C  
(PATHOLOGY)**

1. Discuss the pathology of melanin pigmented lesions of the body.
2. Write notes on,
  - (a) human tumor viruses
  - (b) choristomas
  - (c) pathological effects of pulmonary embolism
2. Describe the different functions of T cells. Outline the functional derangement that occurs during an HIV infection.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
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**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**MAY , 1994**

Date: 30<sup>th</sup> May 1994

Time: 2.00p.m. - 5.00p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**  
**Answer each part in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Give an account of the middle cranial fossa and its contents (excluding the brain)
2. Describe the vascular supply of the eyeball.

**PART B**  
**(PHYSIOLOGY)**

1. Write notes on each of the following
  - (a) Maintenance of clarity of the cornea
  - (b) Spontaneous blinking
  - (c) Optokinetic nystagmus
  - (d) Stereopsis
2. Write an account of the physiology of body temperature regulation in a healthy adult. Comment briefly on the pathophysiology of each of the following
  - (a) Fever
  - (b) Heat stroke

**PART C**  
**(PATHOLOGY)**

1. List four substances that could accumulate in a tissue and cause increase in size of an organ.  
Write a brief account of how such accumulation occurs making reference to pathological mechanisms involved at .....

**POSTGRADUATE INSTITUTE OF MEDICINE**  
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**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**MAY, 1995**

Date: 2<sup>nd</sup> May 1995

Time: 2.00 pm. - 5.00 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**  
**Answer each part in separate answer books.**

**PART A**  
**(ANATOMY)**

1.
  - 1.1 Describe the arrangement of the blood vessels in the different regions of the retina.
  - 1.2 Describe the blood supply of the visual pathway.
  
2. Give an account of the central connections, course, branches and areas of supply of the facial nerve.

**PART B**  
**(PHYSIOLOGY)**

1. Write an essay on the pathophysiology of headache.
  
2. Discuss the Physiological Processes involved in reading a book including a brief note on comprehension of the written word

**PART C**  
**(PATHOLOGY)**

1. Compare and contrast the healing of a cut wound in the skin with that of a cut wound in the central cornea. What factors affect healing at these two sites?
  
2. Write notes on,
  - 2.1 Precancerous lesion.
  - 2.2 Pathological pigmentation manifest in the eye.
  - 2.3 Tumor makers
  - 2.4. Pathological fracture.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
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**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**MAY, 1996**

Date: 6<sup>th</sup> May 1996

Time: 2.00 p.m. - 5.00 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**  
**Answer each part in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Describe the fissures and foramina of the orbit and the structures passing through them.
2. Give an account of the venous and lymphatic drainage of the superficial structures of the face.

**PART B**  
**(PHYSIOLOGY)**

1. Discuss the compensatory mechanisms taking place in the body following the rapid loss of 2 liters of blood.
2. Write an essay on physiology of accommodation.

**PART C**  
**(PATHOLOGY)**

1.
  - 1.1. Define the term embolism.
  - 1.2. List the various types of emboli and discuss the effects they would produce in the body.
2. Write notes on
  - 2.1. Prostaglandins.
  - 2.2. Dormant cancer.
  - 2.3. The functions of mast cells.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
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**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**SEPTEMBER, 1996**

Date: 23<sup>rd</sup> September 1996

Time: 2.00 p.m.- 5.00 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**  
**Answer each part in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Describe the course, relations and the distribution of the intra cranial part of the internal carotid artery. Discuss their clinical significance.
2. Describe in detail the anatomy of the orbital apex.

**PART B**  
**(PHYSIOLOGY)**

1. Discuss the causes of extra cellular oedema.
2. Describe the neuro-physiological processes involved in maintaining ocular posture while playing badminton.

**PART C**  
**(PATHOLOGY)**

1. Write an essay on lymphatic spread of malignant tumors and discuss its clinical significance.
2. Write notes on,
  - 2.1. Sterilization by heat
  - 2.2. Non-steroidal anti-inflammatory drugs.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
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**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**JUNE, 1997**

Date: 16<sup>th</sup> June 1997

Time: 2.00 p.m.- 5.00 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**  
**Answer each part in a separate answer book.**

**PART A**  
**(ANATOMY)**

1. Give a description of the iris, including nerve and blood supply. Add a note on its development.
2. Write an account of the cavernous sinus.

**PART B**  
**(PHYSIOLOGY)**

1. Write short notes on the following,
  - 1.1 factors affecting visual acuity.
  - 1.2 functions of pigment epithelium of the eye.
  - 1.3 maintenance of clarity of the cornea.
2. Discuss the role of the autonomic nervous system in maintaining arterial blood pressure.

**PART C**  
**(PATHOLOGY)**

1. Write short notes on,
  - 1.1 oncogenes
  - 1.2 the use of heat as a method for sterilization in Ophthalmology.
2. Explain with reasons the steps/precautions you would take as a surgeon to ensure good healing of a surgical wound.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
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**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**SEPTEMBER, 1997**

Date: 22<sup>nd</sup> September 1997

Time: 2.00 p.m.- 5.00 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**  
**Answer each part in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Describe the macroscopic and microscopic anatomy of the ocular limbus.
2. Give a detailed account of the nerve supply and blood supply of the skin and muscles of the face and scalp.

**PART B**  
**(PHYSIOLOGY)**

1. What factors affect the size of the pupil? Categorize and discuss the pharmacology and site of action of drugs that modify the size of the pupil.
2. Give an account of calcium homeostasis. Describe the role of calcium in,
  - 2.1. Synaptic transmission
  - 2.2. Skeletal muscle contraction
  - 2.3. Hormone action at cellular level

**PART C**  
**(PATHOLOGY)**

1. Discuss the pathogenesis and morphological features of atherosclerosis.
2. Write short notes on,
  - 2.1. Local anaesthetic drugs
  - 2.2. Embryonic tumors

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**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**MAY, 1998**

Date: 4<sup>th</sup> May 1998

Time: 1.30 p.m.- 4.30 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**

**Answer each part in separate answer books-**

**PART A**  
**(ANATOMY)**

1. Describe the nuclei of origin course and distribution of the oculomotor nerve.
2. Write an account of the muscles of facial expression.

**PART B**  
**(PHYSIOLOGY)**

1. Discuss the physiological mechanisms responsible for regulation of the Partial pressures of oxygen and carbondioxide in arterial blood.  
Explain briefly, the clinical implications of alteration of this regulation in chronic respiratory failure.
2. Write an essay on the field of vision and the factors affecting it.

**PART C**  
**(PATHOLOGY)**

1. Write an essay on the aetiopathogenesis, sequelae and complications of obstruction to lymphatic.
2. Write an account on the non-metastatic effects of malignant tumors.

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**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**SEPTEMBER, 1998**

Date: 28<sup>th</sup> September 1998

Time: 2.00 p.m. -5.00 p.m.

**ESSAY PAPER**

**Answer all questions in part A, B and C.**  
**Answer each part in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Describe the anatomy of the pons.  
Discuss the anatomical basis for the localization and diagnosis pontine lesions.
2. Describe the macroscopic and microscopic anatomy of the ciliary body including its blood supplies and nerve supply.  
Discuss how structure is related to its function.

**PART B**  
**(PHYSIOLOGY)**

1. Give an account on haemostasis.
2. Discuss the factors involved in the alteration of the refractive state of the eye.

**PART C**  
**(PATHOLOGY)**

1. Describe the pathogenesis of localized and generalized oedema.
2. Write notes on,
  - 2.1. Sterilization and disinfection by chemical methods.
  - 2.2. Pathogenesis of graft rejection
  - 2.3. Spread of malignant tumors

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**JUNE, 1999**

Date: 16<sup>th</sup> June 1999

Time: 2.00 p.m.- 5.00 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**  
**Answer each part in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Write an account of the origin, course and distribution of the parasympathetic innervation of the structures in the face and orbit.
2. Write an account of the anatomy of the conjunctiva including its microscopic appearance.

**PART B**  
**(PHYSIOLOGY)**

1. Discuss the role of the kidney in the maintenance of homeostasis.  
Explain briefly how these functions are affected in chronic renal failure.
2. Write short notes on,
  - 2.1 dark adaptation
  - 2.2 the tear film and its functions
  - 2.3 factors that maintain the clarity of the cornea
  - 2.4 electroretinogram

**PART C**  
**(PATHOLOGY)**

1. Describe the pathological processes that occur in an exocrine gland, following obstruction to its main duct.
2. Write notes on,
  - 2.1 effects of total body irradiation
  - 2.2 secondary immunodeficiency states

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**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**SEPTEMBER, 1999**

Date: 29<sup>th</sup> September 1999

Time: 2.00 p.m.- 5.00 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**  
**Answer each part in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Describe the anatomy of the intra orbital part of the optic nerve with its visual fiber arrangement.
2. Describe the central connections of the sensory and motor components of the trigeminal nerve.

**PART B**  
**(PHYSIOLOGY)**

1.
  - 1.1. What biophysical factors determine the blood pressure?
  - 1.2. Explain with examples how blood pressure is increased when these factors are altered by diseases.
2.
  - 2.1. What is meant by axoplasmic transport and what purposes does it serve?
  - 2.2. Discuss under what conditions do disturbances of axoplasmic transport occur?

**PART C**  
**(PATHOLOGY)**

1.
  - 1.1. List the causes of cell death.
  - 1.2. Discuss briefly the different morphological types of cell necrosis.
2. Discuss the pathological features of different types of vasculitis.

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**UNIVERSITY OF COLOMBO**

**MS (OPHTHALMOLOGY) PART I EXAMINATION**

**APRIL, 2000**

Date: 26<sup>th</sup> April 2000

Time: 1.30 p.m. - 4.30 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**

**Answer each question in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Give an account of the oblique extraocular muscles.
2. Give an account of the anatomy of the pituitary gland including its microscopic structure and development.

**PART B**  
**(PHYSIOLOGY)**

1.
  - 1.1. Give an account of the maintenance of acid base balance in the body.
  - 1.2. Explain briefly how a change in pH due to a chronic respiratory disorder is compensated.
2. Write short notes on the following ,
  - 2.1. The oculocardiac reflex
  - 2.2. The electroretinogram (E.R.G.)
  - 2.3. The Stiles-Crawford effect
  - 2.4. The clues upon which monocular depth perception is based

**PART C**  
**(PATHOLOGY)**

1. Enumerate the different types of aneurysms.  
Discuss their pathogenesis and complications.
2. Write short notes on ,
  - 2.1. Chlamydial infections
  - 2.2. heterotrophic calcification
  - 2.3. Metaplasia

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**MS (OPHTHALMOLOGY) PART I EXAMINATION**  
**SEPTEMBER, 2000**

Date: 27<sup>th</sup> September 2000

Time: 1.30 p.m.- 4.30 p.m.

**ESSAY PAPER**

**Answer all questions in parts A, B and C.**  
**Answer each question in separate answer books.**

**PART A**  
**(ANATOMY)**

1.
  - 1.1 Draw and label a diagram of the transverse section of the pons at the level of the facial colliculus (30 marks)
  - 1.2 Discuss the central connections of the facial nerve. (20 marks)
  - 1.3 Describe the course and distribution of the facial nerve. (50 marks)
2. Describe the anatomy of the upper eyelid. (100 marks)

**PART B**  
**(PHYSIOLOGY)**

1. When a nerve innervating a skeletal muscle is stimulated, the muscle responds by contracting. Describe the physiology of events that occur during this process. (100 marks)
2. Compare and contrast the following
  - 2.1 Saccadic eye movements and smooth pursuit eye movements. (35 marks)
  - 2.2 Scotopic vision and photopic vision. (35 marks)
  - 2.3 Physiology of fibrillenstruktur muscle fibres and feldenstruktur muscle fibres of extra-ocular muscles. (30 marks)

**PART C**  
**(PATHOLOGY)**

1.
  - 1.1 Describe the process of wound healing. (70 marks)
  - 1.2 What are the factors that impair fracture healing. (30 marks)
2.
  - 2.1 Describe briefly the different behaviors of tumors giving examples. (50 marks)
  - 2.2 Enumerate investigative methods that are helpful to establish the microbial aetiology of pathological lesions. Give examples. (50 marks)

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (OPHTHALMOLOGY) PART I EXAMINATION**

**APRIL, 2001**

Date: 25<sup>th</sup> April, 2001

Time: 1.30 p.m. to 4.30 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**

**Answer each question in separate answer books.**

**PART A**  
**(ANATOMY)**

1.
  - 1.1 Draw and label a diagram of the transverse section of the open part of the medulla oblongata at the level of the inferior olivary nucleus. (30 marks)
  - 1.2 Discuss the central connections of the hypoglossal nerve. (10 marks)
  - 1.3 Describe the course and distribution of the hypoglossal nerve. (60 marks)
2.
  - 2.1 Describe the anatomy of the cornea including its ultrastructure. (80 marks)
  - 2.2 Explain how its structure helps in achieving corneal transparency. (20 marks)

**PART B (PHYSIOLOGY)**

1.
  - 1.1 Describe the transmission of impulses via the neuromuscular junction. (50 marks)
  - 1.2 Explain the physiological basis for
    - 1.2.1 Fluctuating weakness of ocular muscles, which improve after rest in Myasthenia Gravis (20 marks)
    - 1.2.2 The use of anticholinesterase drugs to treat patients with Myasthenia Gravis (30 marks)
2. Describe the functions of the retinal pigment epithelium. (100 marks)

**PART C (PATHOLOGY)**

1. Discuss the complications of atheroma (100 marks)
2. Write notes on :
  - 2.1 Type IV hypersensitivity (50 marks)
  - 2.2 Effects of malignant tumours (50 marks)

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**UNIVERSITY OF COLOMBO**

**MD (OPHTHALMOLOGY) PART I EXAMINATION**  
**SEPTEMBER, 2001**

Date: 26<sup>th</sup> September, 2001

Time: 1.00 p.m.- 4.00 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**

**Answer each question in separate answer books.**

**PART A**  
**(ANATOMY)**

1.
  - 1.1 Draw and label a diagram of the middle cranial fossa. (40 marks)
  - 1.2 List the fissures and the foramina of the middle cranial fossa and the structures passing through them. (60 marks)
2. Describe the anatomy of the conjunctiva including its structure, blood and nerve supply. Add a note on its development. (100 marks)

**PART B**  
**(PHYSIOLOGY)**

1. Explain the physiological basis of the following ,
  - 1.1 A drop in systolic blood pressure when standing from supine position (30 marks)
  - 1.2 Low urine output following a haemorrhage (40 marks)
  - 1.3 Initial constriction of the pupil followed by dilatation in intracranial haemorrhage (30 marks)
2.
  - 2.1 Describe the criteria for visual acuity. (30 marks)
  - 2.2 Describe the principles involved in the measurement of ordinary visual acuity (40 marks)
  - 2.3 Discuss the factors influencing visual acuity. (30 marks)

**PART C  
(PATHOLOGY)**

1. Describe the pathological mechanisms that lead to the accumulation of fluid in the interstitial tissues. (100 marks)
  
2. Write notes on :
  - 2.1 The laboratory methods available for the diagnosis of diseases caused by viruses. (50 marks)
  
  - 2.2 The role of growth factors in wound healing. (50 marks)

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (OPHTHALMOLOGY) PART I EXAMINATION**  
**MAY, 2002**

Date: 8<sup>th</sup> May, 2002

Time: 1.00 p.m.- 4. 00 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A. Band C.**  
**Answer each question in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Describe venous sinuses of dura mater. (100 marks)
2. Describe the development and the anatomy of the vitreous body.  
Add a note on the ageing changes of the vitreous. (100 marks)

**PART B**  
**(PHYSIOLOGY)**

3. Describe the mechanisms of pain and give the physiological basis for different methods available for pain control. (100 marks)
4. Write notes on :
  - a) Factors affecting topical drug delivery to the eye. (40 marks)
  - b) Physiological mechanisms responsible for drainage of tears. (30 marks)
  - c) Blood ocular barriers. (30 marks)

**PART C**  
**(PATHOLOGY)**

5.
  - 5.1. List the causes of cell injury. (20 marks)
  - 5.2. Describe three types of pathological changes occurring in cells and tissues following injury. (50 marks)
  - 5.3. Describe the biochemical changes that occur in liver failure. (30 marks)
6. Write short notes on :
  - a) The body's response to hypothermia. (30 marks)
  - b) Metaplasia. (35 marks)
  - c) Endotoxins. (35 marks)

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (OPHTHALMOLOGY) PART I EXAMINATION**  
**SEPTEMBER, 2002**

Date :- 25<sup>th</sup> September, 2002

Time :- 1.00 p.m. - 4.00 p.m.

**ESSAY PAPER**

**Answer all questions in Parts A, B and C.**

**Answer each question in separate answer books.**

**PART A**  
**(ANATOMY)**

1. Describe the origin, course and distribution of the oculomotor nerve (3<sup>rd</sup> cranial nerve) (100 marks) .
2. 2.1. Draw a diagram of the ocular limbus and label it. (30 marks)
- 2.2. Write short notes on
  - (a) superior oblique muscle and its actions (30 marks)
  - (b) ciliary zonule (40 marks)

**PART B**  
**(PHYSIOLOGY)**

3. Write an account of neurotransmitters including
  - 3.1. neurotransmitter types
  - 3.2. sites of action
  - 3.3. modes of action at receptor sites. (100 marks)
4. Write notes on
  4. I. Changes in the eye on exposure to dim illumination. (40 marks)
  - 4.2. Electro-oculogram. (30 marks)
  - 4.3. Changes in the crystalline lens in cataract formation. (30 marks)

**PART C  
(PATHOLOGY)**

- 5.
- 5.1. Describe the vascular events of acute inflammation.  
How would you differentiate acute inflammation from chronic inflammation? (50 marks)
  - 5.2. List the sequelae of acute inflammation.  
How will you recognize clinically whether the acute inflammation is resolving or spreading ? (50 marks)
- 6.
- 6.1. Describe briefly the role of oncogenes in neoplasia (40 marks)
  - 6.2. Describe the effects of malignant tumours (60 marks)