

MANIPAL UNIVERSITY**MS (OPHTHALMOLOGY) DEGREE EXAMINATION – APRIL 2016****SUBJECT: PAPER I: BASIC SCIENCES RELATED TO OPHTHALMOLOGY**

Monday, April 18, 2016

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Essay Questions.**

1. Describe the anatomy of the crystalline lens. Discuss the biochemical changes in the lens that take place in the formation of a cataract.

(15 marks)

2. Describe the anatomy of the apex of the orbit. Write a note on clinical applications.

(15 marks)

3. **Short Answer Questions:**

3A. Discuss the mechanisms involved in the maintenance of corneal transparency.

3B. Discuss CD4 count and its importance in ophthalmology.

3C. Classify and discuss antifungal agents in ocular diseases.

3D. Discuss hapten in relation to ophthalmology.

3E. Discuss tear film and add a note on aqueous deficiency.

3F. Discuss the pathology of Flexner-Wintersteiner rosettes with a note on its clinical importance.

3G. Discuss Immunomodulators and their uses in ocular disorders.

3H. Discuss Elisa and its applications in ocular diseases.

3I. Discuss anatomy of the extra ocular muscles.

3J. Discuss aqueous humor dynamics.

(7 marks × 10 = 70 marks)



MANIPAL UNIVERSITY**MS (OPHTHALMOLOGY) DEGREE EXAMINATION – APRIL 2016****SUBJECT: PAPER II: CLINICAL OPHTHALMOLOGY**

Tuesday, April 19, 2016

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Essay Questions.**

1. What are the causes of acute proptosis in a child? How do you manage Orbital cellulitis?
(15 marks)
2. Discuss mechanisms of Primary angle closure glaucoma. How do you treat an acute angle closure attack?
(15 marks)

3. **Short Answer Questions:**

- 3A. Classify Diabetic Retinopathy. Describe the fundus in severe Nonproliferative retinopathy.
- 3B. Discuss differential diagnosis of monocular defective elevation.
- 3C. How do you investigate a case of unilateral recurrent iridocyclitis?
- 3D. Outline the ocular manifestations and treatment of Myasthenia gravis. Add a note on Ocular Myasthenia.
- 3E. What is the importance of fundus examination in a child who fails to thrive?
- 3F. Describe the aetiology signs and symptoms of Anterior Ischaemic optic Neuropathy.
- 3G. What is Amaurotic cat's eye? Discuss the differential diagnosis.
- 3H. What are the signs and symptoms of Caroticocavernous fistula.
- 3I. Describe causes, symptoms and field changes in Toxic Amblyopia.
- 3J. What is Rubeosis iridis? Mention the causes.

(7 marks × 10 = 70 marks)



MANIPAL UNIVERSITY**MS (OPHTHALMOLOGY) DEGREE EXAMINATION – APRIL 2016****SUBJECT: PAPER III: PRINCIPLES AND PRACTICE OF SURGERY OF EYE AND RELATED TOPICS**

Wednesday, April 20, 2016

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Draw diagrams wherever required.**

✍ **Essay Questions:**

1. Write on clinical features and management of Exudative ARMD (Age related macular degeneration).

(15 marks)

2. Discuss indications for lateral orbitotomy. Write briefly on its surgical steps.

(15 marks)

3. **Write short answers for the following:**

3A. Dissociated Vertical Deviation

3B. Presbyopic Lasik

3C. Management of a patient with long standing right sixth nerve palsy

3D. Hydrophobic vs. Hydrophilic Intra Ocular Lenses

3E. Management of Neovascular glaucoma

3F. Principles of Corneal tear repair

3G. Pathogenesis of Rhegmatogenous retinal detachment

3H. Uses of Amniotic membrane in Ophthalmology

3I. Management of unilateral Retinoblastoma

3J. Surgical management of involutional ectropion

(7 marks × 10 = 70 marks)



MANIPAL UNIVERSITY**MS (OPHTHALMOLOGY) DEGREE EXAMINATION – APRIL 2016****SUBJECT: PAPER IV: RECENT ADVANCES IN OPHTHALMOLOGY**

Thursday, April 21, 2016

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Draw neat and labeled diagram wherever necessary.**

✍ **Essay Questions:**

1. Describe the principle of OCT (Optical Coherence Tomography). Discuss the OCT based classification of diabetic macular edema and its treatment.

(15 marks)

2. Discuss the imaging modalities used in the management of keratoconus. Add a note on Collagen cross linking (C3R) in keratoconus.

(15 marks)

3. **Short Answer Questions:**

3A. Discuss the advances in microkeratomes.

3B. Discuss the non-surgical management techniques in blepharoplasty.

3C. Discuss the role of Biologic agents in uveitits.

3D. Discuss the role of UBM (ultrasound biomicroscopy) in anterior segment diseases.

3E. Describe the technique and advantages of deep sclerectomy.

3F. Discuss the types, advantages and disadvantages of multifocal intra ocular lens (IOL).

3G. Discuss the role of stem cells in Ophthalmology.

3H. Discuss the wide angle viewing systems used in pars plana vitrectomy.

3I. Discuss the recent advances in strabismus surgery.

3J. Discuss the adjuncts used to dilate the pupil during cataract surgery in patients with small pupil.

(7 marks × 10 = 70 marks)

