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**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MS (OPHTHALMOLOGY) DEGREE EXAMINATION – APRIL 2019**  
**SUBJECT: PAPER I: BASIC SCIENCES RELATED TO OPHTHALMOLOGY**

Tuesday, April 02, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

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✍ **Answer ALL the questions.**

✍ **Essay Questions.**

1. Describe the anatomy of the visual pathway with its blood supply. Discuss the visual field defects associated with chiasmal lesions.

(15 marks)

2. Discuss the layers of the eyelid. Describe the anatomy of levator palpebrae superioris with the various methods to examine its action.

(15 marks)

3. **Short answer questions:**

3A. Describe the pathology of malignant melanoma of the choroid.

3B. Discuss Viscoelastic Substances used in ophthalmology.

3C. Discuss the role of genetic counselling in Retinitis Pigmentosa.

3D. Discuss the metabolism of the lens. Add a note on the clinical applications in diabetes mellitus.

3E. Discuss clinical uses of prisms in ophthalmology.

3F. Discuss botulinum toxin and its uses in ophthalmology.

3G. Discuss components of the tear film. Add a note on Dry Eye Syndrome.

3H. Discuss role of stem cells in ophthalmology.

3I. Discuss binocular vision. Mention tests for stereopsis.

3J. Discuss anti viral drugs and its uses in ocular diseases.

(7 marks × 10 = 70 marks)



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**MS (OPHTHALMOLOGY) DEGREE EXAMINATION – APRIL 2019**  
**SUBJECT: PAPER II: CLINICAL OPHTHALMOLOGY**

Wednesday, April 03, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

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

✍ **Essay Questions:**

1. Discuss the causes, clinical features and management of retinal vasculitis. (15 marks)

2. List the disorders grouped under phakomatoses. Discuss the ocular and systemic features of neurofibromatosis. (15 marks)

3. **Short answer questions:**

3A. Discuss the management of a chemical injury to the eye.

3B. Describe the clinical features and management of phacolytic glaucoma.

3C. Write briefly about the mechanism, uses and complications of Nd-YAG laser procedure in the eye.

3D. Discuss the differential diagnoses for nodule at the limbus.

3E. Discuss the clinical features and management of vernal keratoconjunctivitis.

3F. Discuss the management of a 3 years old child with unilateral cataract.

3G. Discuss the clinical features and management of orbital cellulitis.

3H. Discuss the management of dry eye.

3I. Discuss the causes of chronic retro-bulbar neuritis.

3J. Discuss the differentiating features between paralytic and non-paralytic squint.

(7 marks × 10 = 70 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MS (OPHTHALMOLOGY) DEGREE EXAMINATION – APRIL 2019**

**SUBJECT: PAPER III: PRINCIPLES AND PRACTICE OF SURGERY OF EYE AND RELATED TOPICS**

Thursday, April 04, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

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✍ **Answer ALL the questions.**

✍ **Essay Questions:**

1. Describe the pre-operative, intraoperative and post-operative management of a unilateral congenital cataract in a 2 year old child.

(15 marks)

2. Describe etiopathogenesis, clinical features, diagnosis and surgical management of involutinal ectropion.

(15 marks)

3. **Short answer questions:**

3A. Discuss glaucoma surgeries with a note on implants.

3B. Discuss deep anterior lamellar keratoplasty.

3C. Discuss surgical methods of treatment of vitreous haemorrhage. Add a note on causes.

3D. Discuss management of a 4mm tumor on the upper lid of a 70 year old.

3E. Discuss management of stage 4 retinopathy of prematurity.

3F. Discuss management of congenital nasolacrimal duct obstruction.

3G. Discuss management of fracture floor of orbit.

3H. Discuss traumatic optic neuropathy.

3I. Discuss management of a contracted socket.

3J. Discuss newer intra ocular lenses.

(7 marks × 10 = 70 marks)



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**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MS (OPHTHALMOLOGY) DEGREE EXAMINATION – APRIL 2019**  
**SUBJECT: PAPER IV: RECENT ADVANCES IN OPHTHALMOLOGY**

Friday, April 05, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Essay Questions:**

1. Discuss the advances in Laser in-situ keratomileusis (LASIK).  
(15 marks)
2. Explain the innovations in the technology and technique of phacoemulsification.  
(15 marks)

3. **Short answer questions:**

- 3A. Discuss Dynamic contour tonometry.
- 3B. Explain accommodative intraocular lens.
- 3C. Explain the impact of the Human Organ Transplantation act on corneal transplantation.
- 3D. Discuss the role of wide field imaging and angiography in ophthalmology.
- 3E. Discuss the dyes and their application in ophthalmology.
- 3F. Outline the management of a case of Fuchs endothelial dystrophy with cataract.
- 3G. Discuss CMV retinitis including management.
- 3H. Discuss laser trabeculoplasty procedures.
- 3I. Discuss uses of cyanoacrylate glue in ophthalmology.
- 3J. Discuss Non penetrating Glaucoma surgery.

(7 marks × 10 = 70 marks)

