

**OPHTHALMOLOGY**

**PAPER –I**

OPH/J/13/26/1

Time : 3 hours  
Max. Marks : 100

**IMPORTANT INSTRUCTIONS**

- This question paper consists of 10 questions divided into Part 'A' and Part 'B', each part containing 5 questions.
- Answers to questions of Part 'A' and Part 'B' are to be strictly attempted in separate answer sheet(s) and the main + supplementary answer sheet(s) used for each part must be tagged separately.
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- Attempt all questions in order.
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**PART A**

1. Enumerate the conditions associated with corneal neovascularization. Briefly discuss the mechanism and various treatment modalities with their rationale of treatment in the management of this condition. 3+3+4
2. Give principle of keratometry. What are the types of keratometers and basic difference between them? Give typical keratometric features in keratoconus. 4+3+3
3. Briefly write on the development of crystalline lens. Enlist the biochemical mechanism of cataractogenesis. Briefly write about various congenital and developmental anomalies of lens. 3+3+4
4. Discuss all the possible ocular injuries with a cricket ball to the eye in a 20 year old male. Give management of traumatic retinal disorders. 5+5
5. Describe AV pattern deviations. Discuss etiology, clinical features and management of these deviations. 2+(2+3+3)

P.T.O

OPHTHALMOLOGY

PAPER -I

Please read carefully the important instructions mentioned on Page '1'

PART B

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|-----|---|-----------|
| 6.  | What are the common tumors of optic nerve in adults? Give clinical features to differentiate them clinically and give salient pathologic features of these tumours. | 3+2+5     |
| 7.  | What are spherical aberrations? How do the spectacle lenses induce these aberrations? What modifications are done to minimize these spectacle induced aberrations?  | 3+3+4     |
| 8.  | Discuss clinical features, classification, investigations and management of diabetic macular edema.   | 3+2+2+3   |
| 9.  | Discuss in detail the ocular manifestations of AIDS.  | 10        |
| 10. | What is Horner's syndrome? Discuss clinical features, diagnosis and management of this syndrome.  | 1+(3+3+3) |

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OPHTHALMOLOGY

PAPER –II

OPHTH/J/13/26/II

Time : 3 hours  
Max. Marks : 100

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PART A

1. What are the factors affecting the SIA (Surgery Induced Astigmatism). How do you manage these cases having pre-operative astigmatism during the surgery for cataract. 5+5
2. Give indications of surgery for pediatric cataract. Outline complete management and specific surgical challenges in a 2 year old child with unilateral cataract. 3+3+4
3. What are femtosecond Lasers? What are the current indications of femtosecond Lasers in corneal refractive surgery? What is opaque bubble Laser? 3+5+2
4. How do you diagnose severe ocular surface disease? Discuss causes and management of these entities, when existing in unilateral and bilateral manner. 3+(3+4)
5. Discuss clinical features, differential diagnosis and management of metastatic endophthalmitis in a 15 year old boy. 4+3+3

P.T.O

OPHTHALMOLOGY

PAPER -II

Please read carefully the important instructions mentioned on Page '1'

PART B

6. Define flow rate, vacuum, rise time, surge and duty cycle in phacoemulsification surgery. What are the basic principles in ultrasonic power modulations and advantages of these modulations? (1+1+1+1+1)+3+2
7. Discuss clinical features, diagnosis and management of intraocular and extraocular cysticercosis. 3+3+4
8. Discuss clinical features, differential diagnosis and management of lid tumor. 3+3+4
9. Write clinical features and management of retinal detachment with giant retinal tear in a 22 year old boy with Marfan's Syndrome. 3+7
10. Write diagnostic features of glaucomatous visual field defect on automated perimetry (30-2). 10

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OPHTHALMOLOGY

PAPER –III

OPHTH/J/13/26/III

Time : 3 hours  
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PART A

1. Describe the clinical features and management of intermittent divergent squint. 3+7
2. How you will diagnose diabetic macular edema? Discuss its investigation and management. 2+3+5
3. Describe the pathophysiology of vernal keratoconjunctivitis (VKC) correlating with clinical picture and rationale of treatment. 4+3+3
4. What are the clinical features of blow out fracture? Discuss its investigation and management. 2+2+6
5. What are the causes of posterior capsular rupture and how you will manage it in a phacoemulsification surgery? 5+5

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OPHTHALMOLOGY

PAPER –III

Please read carefully the important instructions mentioned on Page '1'

PART B

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|-----|--|---------|
| 6.  | Define complicated cataract. What are the various causes for it? How will you manage such cases?   | 2+4+4   |
| 7.  | What are the minimum criteria for Primary Open Angle Glaucoma (POAG)? Give severity classification of POAG with concept of target pressure.  | 3+7     |
| 8.  | What are various clinical features and complications of acute attack of anterior uveitis? Discuss its management.                            | (2+3)+5 |
| 9.  | What is amblyopia? Explain the concept of critical period in development of vision. Outline the principles of treating strabismic amblyopia. | 4+3+3   |
| 10. | Discuss pathophysiology and management of ocular toxoplasmosis.  | 7+3     |

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OPHTHALMOLOGY

PAPER –IV

OPHTHO/J/13/26/IV

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PART A

1. What is the principle of Ocular Coherence Tomography (OCT). What are its uses in corneal and retinal diseases? 2+(4+4)
2. What are the various types of anesthesia used for cataract surgery? Describe briefly merits and demerits of each. 2+(4+4)
3. Describe optics of 'Jack in the Box' phenomenon. How can you prevent it? 5+5
4. Describe the anatomy of cavernous sinus. Name all the structures passing through it. 5+5
5. Discuss the role of genetics in Ophthalmology. 10

P.T.O

OPHTHALMOLOGY

PAPER -IV

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PART B

6. What is Scheimpflug's principle? How is it useful in Ophthalmology? Name the appliance which uses this principle. 4+4+2
7. To establish an ocular microbiology lab, which all medias will be needed? Name the diseases in which each of these media are useful? 6+4
8. What are viscoelastics? How do you classify them? Briefly give the indications of each and their side effects. 1+3+(4+2)
9. Describe the pupillary pathway of the eye. Write in brief about the lesions in light near dissociations and its implications. 5+5
10. What is a cross cylinder? Where all is it used during refractions? How can you create a cross cylinder by using lenses from the trial set, please explain giving an example. 2+4+4

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