Topic-Wise MUHS Question Bank 2009 - 2018

Eye Learn

All about the Eye

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All about the Eye

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18. Community ophthalmology
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I. Anatomy and Physiology

A. Retina, visual pathway and physiology of vision

1. Retina- Anatomy, physiology and embryology. Summer 2009, 2017
2. Henle's nerve fibre layer of retina. Winter 2009
3. Histology of macula. Summer 2017
4. Foveal avascular zone. Summer 2017
5. Dark adaptation. Summer 2014, Winter 2010
6. Describe theories of colour vision. Classification and tests for colour blindness. Summer 2013,2017,2018, Winter 2012,2014
7. Describe in detail the photoreceptor cells and concept of trichromacy and colour vision defects. Winter 2009
8. Optic disc – Anatomy and congenital anomalies. Summer 2010
9. Field defects in optic chiasma and optic tract lesion. Winter 2010
10. Anatomy of optic nerve head. Winter 2015
11. Blood supply of optic nerve head and clinical significance. Summer 2015, Winter 2016
12. Anatomy of LGB and blood supply of visual cortex. Winter 2013
13. Blood supply of afferent visual pathway. Winter 2014

B. Uvea, Aqueous humour and Intraocular pressure:

1. Gross anatomy of choroid. Arterial supply of iris, ciliary body and choroid. Winter 2009
2. IOP- Factors influencing IOP. Summer 2013
3. Aqueous humour- Mechanism of production, drainage and physiology. Summer 2013,2010, 2012
4. Abnormalities of angle on gonioscopy. Summer 2010, 2012
5. Anatomy of angle of anterior chamber. Summer 2012, Winter 2010,2013

C. Orbital nerves and autonomic nerve supply of eye

1. Oculomotor nerve- course, distribution, applied aspects and lesions. Summer 2009, Winter 2011
2. Superior Orbital fissure and applied anatomy. Sumer 2015, Winter 2009,2016
3. Abduct the nerve. Summer 2011
4. Trochlear nerve. Summer 2012
5. Sympathetic innervation of eye. Summer 2013

D. Lens

1. Lens- Biochemical composition. Summer 2009
2. Lens metabolism. Summer 2010
3. Microscopic anatomy of lens and physiology. Summer 2013, Winter 2015,2016
4. Describe developmental anatomy of lens and factors responsible for maintenance of its transparency and factors responsible for its transparency. Summer 2017, Winter 2016,2017

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E. Lacrimal apparatus and tear film

1. Tear film – Physiology and assessment of function. Summer 2009,2011,2018, Winter 2011,2013 2014
2. Anatomy of lacrimal passage and apparatus. Summer 2016

F. Ocular muscles, eyelids and motility

1. Extra ocular muscles- origin, insertion, action. Discuss different laws that govern ocular movements. Supra nuclear control of ocular movements. Summer 2017, Winter 2016
2. LPS- Anatomy. Summer 2010
3. Superior oblique and Inferior oblique anatomy. How to evaluate function of oblique muscles? Winter 2010
4. Inferior rectus anatomy. Summer 2011
5. Eyelid anatomy. Winter 2012
6. Smooth muscles of eye. Winter 2015

G. Cornea, limbus and sclera

1. Anatomy of cornea and congenital anomalies. Summer 2011
2. Corneal transparency. Summer 2015
3. Describe structure, metabolism and function of avascular structure of eye. Summer 2018

H. Blood supply and ocular circulation

1. Arterial supply of eye. Summer 2013
2. Arterial supply of anterior segment of eye. Winter 2015

I. Ocular Immunology

1. Describe in detail immunological processes in ocular tissue. Summer 2016

II. Cornea

1. Etiology, signs, symptoms, complications and treatment of corneal ulcer. Summer 2010
2. Dendritic Ulcer. Summer 2011, Winter 2015
3. Fungal Keratitis. Mycotic Corneal ulcer- Management. Summer 2011,2012, Winter 2016,2013
4. Peripheral corneal ulcer. Summer 2014
5. Discuss management of herpes simplex keratitis. Summer 2015
6. Keratoconus- Management and Newer treatment modalities. Summer 2010,2011,2016,2018, Winter 2011, 2010,2014
7. Terrien's marginal degeneration. Summer 2016
8. Peripheral Corneal degeneration. Winter-2010,2014
9. Band Keratopathy. Summer 2011, Winter 2014
10. Keratomalacia. Summer 2015
11. Presentation of common endothelial anomalies. Summer 2018
12. Corneal blood staining. Summer 2017
13. Microphthalmos. Winter 2014

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III. Optics, Refraction and Instruments

1. Strums conoid. Summer 2011
2. Describe physiology of vision, it's applied importance in stereoscopic vision and field. Summer 2012,2014
3. Describe physiology of binocular vision and clinical tests for stereopsis. Summer 2016, Winter 2017
4. Measurement of visual acuity in school children and infants. Summer 2009, Winter 2013
5. Newer methods of assessment of visual acuity. Summer 2013, Winter 2015
6. Cycloplegics in refraction. Winter 2012
7. Reduced schematic eye. Summer 2010
8. Astigmatism. Summer 2010
9. Tests for correction of astigmatism. Summer 2017
10. Anisometropia Summer 2011
11. Theories of myopia. Summer 2016
12. Pathological myopia. Summer 2011
13. Anomalies of accommodation. Summer 2017, 2018
14. Spasm of accommodation. Winter 2013
15. Convergence insufficiency. Summer 2010
16. Jackson's cross cylinder. Summer 2015, Winter 2013
17. Uses of prisms in ophthalmology. Mention types and optics. Summer 2010,2015, Winter 2009,2015,2016
18. Optical principles of automated refraction. Winter 2009
19. Optical principles of refractometer. Winter 2012
20. Principle and use of 90D lens. Summer 2018, Winter 2012
21. Optics of direct and indirect ophthalmoscope. Summer 2011,2017, Winter 2010,2012,2014
22. Javal and Schiotz keratometer- Principle. Winter 2013
23. Orthokeratology. Summer 2015
24. Low vision aids. Summer 2016, Winter 2009,2014,2015,2016

IV. Cornea and Refractive Surgery

1. Keratoplasty- Classification, indications, contraindications, principles of surgery, procedure, recent advances. Summer 2009, 2012, 2014, 2015
2. Principles of latest techniques of keratoplasty. Summer 2009
3. Describe indications, prognostic factors, procedures of DSEK. Discuss postoperative management and follow up. Summer 2017
4. Recent advances in management of Bullous Keratopathy. Summer 2013
5. Discuss diagnosis and management of acute corneal graft rejection. Winter 2015
6. Conductive keratoplasty. May 2013
7. LASIK – Principle, advantages and disadvantages. Summer 2009,2012
8. Describe recent advances in laser refractive surgery. Winter 2016
9. Describe recent advances in keratorefractive surgeries. Winter 2010
10. Discuss optical principles of various methods of correction of myopia. Summer 2013, Winter 2015
11. Phakic IOL. Summer 2010, 2014,2015, Winter 2010, 2016
12. Presbyopic IOL. Summer 2011, 2014
13. Surgical treatment for presbyopia. Summer 2012
14. Intracorneal lens. Summer 2014
15. Implantable contact lens. Summer 2017
16. Contact lenses for keratoconus. Winter 2013
17. CL for sportsmen. Spectacle lenses for (protective) for sportsman. Winter 2012, 2013
18. Boston contact lens. Winter 2012
19. Toric CL. Summer 2016
20. Keratoprosthesis/ Boston ocular surface prosthesis. Summer 2009, 2011,2013,2014
21. Endothelial specular microscopy. Summer 2011, 2013, 2014

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22. MK medium. Summer 2018
23. Importance of eye bank. It's concept, organization, running, current status in India. Summer 2013, Winter 2015,2016

V. Conjunctiva/Limbus/ Miscellaneous ocular surface

1. Different methods of pterygium surgery. Winter 2009,2013,2015
1. Amniotic membrane transplantation. Summer 2011,2015, Winter 2010,2014,2015,2016
2. Limbal stem cell transplantation. Summer 2013,2015, Winter 2009,2013,2014,2016
3. Atopic conjunctivitis. Winter 2010
4. Noninfectious conjunctivitis. Winter 2013
5. Discuss types, clinical features, management and complications of viral conjunctivitis. Winter 2016
6. Molluscum Contagiosum. Summer 2013
7. Spring catarrh. Summer 2011, Winter 2015
8. Trachoma. Winter 2015
9. Xerophthalmia. Summer 2012
10. Vitamin A deficiency. Summer 2009,2015, Winter 2012
11. Dry eye – Various causes. Summer 2009
12. Keratoconjunctivitis Sicca. Summer 2010
13. Cicatrical pemphigoid. Winter 2009, 2014
14. Steven Johnson's syndrome-Clinical features and treatment. Summer 2011, 2013
15. Goldenhaar syndrome. Summer 2009,2018

VI. Glaucoma

1. Trabecular meshwork in pathogenesis of glaucoma. Summer 2018
2. Angle closure glaucoma- Etiology, Pathogenesis, clinical features and treatment. Winter 2009,2014
3. Open angle glaucoma- Etiology, pathogenesis, diagnosis and treatment. Winter 2011,2015
4. Buphthalmos. Winter 2016
5. Secondary Glaucoma- Causes, etiopathogenesis and treatment. Winter 2010
6. Steroid induced glaucoma. Summer 2013
7. Neovascular glaucoma. Winter 2015
8. Malignant glaucoma. Summer 2014
9. Phacolytic glaucoma. Summer 2015
10. Trabeculoplasty. Summer 2011
11. Describe recent advances, investigations and surgery of glaucoma. Summer 2010,2012,2013, Winter 2014,2016
12. Express shunt in glaucoma surgery. Winter 2012
13. Glaucoma drainage devices. Winter 2016
14. Latanoprost/ Prostaglandin analogues. Winter 2016, Summer 2009,2011,2015.
15. Timolol. Summer 2011
16. Newer anti glaucoma drugs. Summer 2012,2016
17. Medical treatment of open angle glaucoma. Summer 2015.
18. Role of anti-fibrotic agents in glaucoma/Antimitotic agents. Summer 2015
19. New techniques in early diagnosis of glaucoma. Winter 2010
20. Applanation tonometry. Summer 2009,2011,2014, Winter 2014
21. Dynamic contour tonometry. (Pascal) Winter 2012.
22. Rebound tonometry. Summer 2017
23. Gonioscopy. Summer 2012

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VII. Lens

1. Write complications of cataract surgery. How will you prevent and manage them? Winter 2009
2. Describe various techniques of MSICS. Discuss intraoperative management of PCR. Summer 2015.
3. Phaconit. Winter 2009
4. Phacoemulsification- various techniques, new concepts, complications. Summer 2010,2018, Winter 2013
5. Black cataract. Summer 2011
6. Zonular Cataract and it's treatment. Winter 2013
7. D/D of amaurotic cat's eye reflex in detail. Management of congenital cataract. Summer2009,2013. Winter 2014
8. Cataract surgery in patients of uveitis. Winter 2010,2015
9. Complicated cataract. Summer 2015
10. Viscoelastic agents. Winter 2011
11. Future of IOL. Summer 2012
12. Describe advances in IOLs used following cataract surgery. Mention about toric/ multifocals and micro incision IOLs. Summer 2013. Winter 2012,2015
13. Multifocal IOLs. Winter 2016
14. Glued intraocular lens. Winter 2013
15. IOL power calculation. Describe IOL power calculation in post refractive surgery patients. Summer 2018, Winter 2016
16. Subluxation lens presentation and management. Summer 2014.
17. Ectopia lentis. Summer 2010,2015
18. Recent advances in cataract surgery. Winter 2013.
19. Femtosecond laser in cataract and refractive surgery- Principle, technique, advantages and disadvantages. Summer 2015
20. Describe advantages and limitations of most recent lasers used for cataract surgery. Summer 2017
21. Laser photolysis of cataracts. Summer 2013
22. Laser capsulotomy. Winter 2010

VIII. Uvea

1. Investigatory work up in uveitis. Summer 2009, Winter 2012, 2014
2. Acute iridocyclitis- Etiology, clinical features, complications and treatment. Summer 2010
3. Childhood arthritis and anterior uveitis. Summer 2016, Winter 2009
4. Discuss intermediate uveitis. Evaluation of a case of intermediate uveitis. Summer 2013, 2014
5. Hypertensive uveitis. Summer 2018
6. Toxoplasma retinochoroiditis. Summer 2016
7. CMV retinitis. Summer 2018
8. Ocular sarcoidosis. Summer 2010
9. Ocular manifestations of leprosy. Describe various granulomatous inflammations and its features. Summer 2011,2012, Winter 2013,2016
10. Vogt-Koyangi Harda syndrome. Summer 2012,2016, Winter 2016
11. Sympathetic ophthalmitis. Summer 2015
12. Cysticercosis. Ocular manifestation of parasitic disorders. Summer 2015,2017

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IX. Retina & Vitreous

1. Pathogenesis of various types of RD. Summer 2009
2. Retinal dialysis. Summer 2011
3. RD in myopia. Summer 2016
4. DR – classification, pathogenesis, management, diagnosis, recent advances with specific reference to trials. Add a note on diabetic maculopathy. Summer 2009,2010,2012,2013,2015, Winter 2010,2012,2013,2014,2016
5. Sutureless vitrectomy. Summer 2009
6. MIVS- Principles, techniques, advantages and disadvantages. Summer 2016
7. What are the advantages, risks and complications of scleral buckling and PPV? Advances in vitrectomy surgery? Winter 2009
8. Principles of RD surgery. Principles of conventional reattachment surgery. VR surgery- Recent advances, indications and techniques. Summer 2012,2013,2014, Winter 2015
9. Silicon oil in VR surgery. Indications and complications. Summer 2010, Winter 2010
10. Fluoridated silicon oil. Summer 2009,2018
11. Central serous retinopathy. Winter 2009,2012,2014
12. RVO- Etiology, risk factors, types, complications and treatment. Winter 2009
13. ARMD- pathogenesis and treatment. Anti VEGF in ARMD. Recent treatment in ARMD. Summer 2006,2010,2011,2012, Winter 2010,2011,2014
14. Bevacizumab. Intravitreal steroids. Winter 2010
15. Newer intravitreal drugs. Summer 2012
16. Anti VEGF. Winter 2012
17. Endophthalmitis- Etiopathogenesis, drugs used intravitreally. Summer 2018
18. Retinal angiomatosis. Summer 2010
19. Angioid streaks. Summer 2018
20. ROP- Etiology, classification, clinical features, screening, complications and treatment. Summer 2010,2016, Winter 2012, 2013
21. CME – Etiology, signs, symptoms and treatment. Summer 2011, Winter 2012
22. Sickle cell retinopathy. Summer 2011, Winter 2013
23. Chloroquine retinopathy. Winter 2014
24. Retinopathy of toxemia of pregnancy. Summer 2016, Winter 2015
25. Retinitis pigmentosa. Recent advantages in treatment. Summer 2016
26. OCT in macular disorders. Winter 2010
27. FFA. Winter 2013
28. Amsler grid. Summer 2014
29. Retinal prosthesis. Winter 2016
30. Retiserts in ocular therapeutics. Summer 2017
31. Vitreous hemorrhage and it's management. Summer 2013, Winter 2012
32. Posteriors vitreous detachment. Summer 2013

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X. Strabismus, Binocular Vision, Amblyopia

1. Amblyopia- Classification, etiology, management, current guidelines and physiology. Summer 2010,2015, Winter 2009,2014
2. Squint- Classification. How will you investigate a case of concomitant convergent squint in a child of 5 years. How will you treat it? Winter 2012
3. Discuss- concomitant squint- evaluation and management. Winter 2011
4. Discuss esodeviations. Summer 2013, Winter 2014
5. Accommodative esotropia. Winter 2013
6. Anomalies of convergence and its management. Winter 2016
7. Exotropia- Etiology, clinical features, tests for concomitant strabismus. Winter 2016
8. Micro tropia. Summer 2012, Winter 2010
9. Latent squint. Summer 2016
10. Duane's retraction syndrome. Summer 2018
11. Brown syndrome / Superior oblique sheath syndrome. Summer 2011, Winter 2014
12. Adjustable sutures in indications of squint surgery. Summer 2011, Winter 2014
13. Worth 4 dot test. Summer 2009, Winter 2014
14. Uses of synaptophore. Summer 2016

XI. Orbit, tumours and trauma

1. Role of chemotherapy in treatment of retinoblastoma with special reference to; Post enucleation chemotherapy. Chemoreduction. Newer molecules of chemotherapy for Retinoblastoma. Summer 2009,2010, Winter 2016
2. Describe metastatic orbital tumours. Discuss surgical approaches in management of orbital tumours. Winter 2010
3. Rhabdomyosarcoma. Summer 2018
4. Orbital cellulitis. Winter 2009,2013
5. Ocular prosthesis. Summer 2012,2018
6. Orbital implants. Summer 2015
7. Blunt trauma to eye- details about ocular manifestations and management of a case. Winter 2012

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XII. Eyelids and Lacrimal Drainage System

1. Evaluation of ptosis. Etiopathogenesis, clinical features, differential diagnosis and management. Summer 2015,2016, Winter 2015
2. Entropion. Summer 2010, Winter 2012
3. Describe in detail applied anatomy of lid. Bilateral congenital ptosis management. Summer 2012
4. LPS resection. Summer 2014
5. Upper eyelid applied anatomy. Severe ptosis treatment. Summer 2014
6. Lid reconstruction. Winter 2010,2014
7. Blepharitis. Summer 2011
8. Blepharospasm. Summer 2013
9. Lagophthalmos. Summer 2015
10. Rodent ulcer. Summer 2014,2018
11. Mixed tumour of lacrimal gland. Summer 2011
12. Histopathology of various lacrimal gland tumours. Summer 2018
13. Endoscopic dacryostorhinostomy. Winter 2009
14. Role of Botox in ophthalmology. Summer 2009,2016 Winter 2010,2015

XIII. Neuro-Ophthalmology

1. Marcus Gunn Pupil. Summer 2010
2. Hemianopia. Summer 2012,2014
3. Nystagmus- Causes, classification. Summer 2015,2017, Winter 2016
4. Mechanism of pupillary reflexes and their clinical significance. Winter 2014
5. Wernicke's pupil. Summer 2016
6. Discuss visual field defects produced by various types of lesions affecting LGB and visual cortex. Summer 2016
7. Behavior of optic nerve head injury. Summer 2018
8. Ocular manifestations of temporal arteritis. Ocular ischemic syndrome. Anterior ischemic optic neuropathy. Summer 2015, Winter 2012,2015
9. Neuro-ophthalmological manifestation of system diseases and new modalities of their investigation. Winter 2015
10. Pupillometry. Summer 2016
11. Foster Kennedy syndrome. Summer 2014
12. CPEO. Summer 2017

XIV. Diagnostic modalities and Imaging

1. Anterior segment OCT. Summer 2009
2. OCT- Applications in anterior and posterior segment disorder. Summer 2012
3. Spectral domain OCT. Summer 2015
4. Swept source OCT. Winter 2015
5. USG B-Scan – Principle and uses. Winter 2013
6. Pentacam. Summer 2013
7. Wavefront technology. Summer 2018
8. Ultrasound biomicroscopy. Summer 2014, Winter 2009,2012,2015
9. Specular microscopy. Summer 2018, Winter 2009
10. Corneal pachymetry - It's applied importance. Summer 2014
11. Automated perimetry. Summer 2013
12. Frequency doubling perimetry. Winter 2013
13. Ophthalmodyanomometry. Summer 2011
14. Scanning laser polarimetry. Winter 2013
15. ERG. Summer 2012. Winter 2014
16. Multifocal ERG. Winter 2016
17. VEP. Winter 2008
18. Electro diagnostic tests in childhood blindness. Summer 2016
19. Neuroimaging in ophthalmology. Summer 2012
20. Ophthalmic photography. Summer 2018

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XV. Ophthalmology in relation to medicine

1. Thyroid eye disease- pathogenesis, clinical features and treatment.
2. Write a note in dysthyroid ophthalmopathy. Summer 2009,2011,2014,2015, Winter 2012,2013,2016.
3. Diabetes in eye. Summer 2012
4. Ocular manifestations of AIDS. Summer 2009,2010,2012,2016,2017, Winter 2016
5. Ocular manifestations of various STDs. Summer 2014,2015, Winter 2013,2015
6. Ocular manifestations of TB. Summer 2016
7. Ocular manifestations of congenital syphilis and congenital rubella. Mention Hutchinson's triad. Summer 2010,2012,2013,2014,2015, Winter 2010
8. Carotid-cavernous fistula- clinical features and treatment. Summer 2018
9. Migraine. Ocular causes of headache. Winter 2009,2012
10. Phacomatosis. Summer 2011,2013,2014
11. Neurofibromatosis. Winter 2009,2013
12. Ophthalmological features of sphenoid ridge meningioma. Winter 2010
13. Ocular manifestations of meningitis. Papilledema. Winter 2012,2015
14. Ocular manifestations of intracranial tumors. Summer 2017
15. Ocular manifestations of multiple sclerosis. Summer 2014
16. Myasthenia Gravis. Summer 2010, Winter 2010,2014,2016
17. Ocular manifestations of leukemia. Summer 2009
18. Ocular manifestations of sickle cell anemia. Summer 2009
19. Ocular manifestations of hematological disorders. How will you investigate and treat them. Winter 2009,2014
20. Oculocutaneous albinism. Summer 2011
21. Ocular features of inborn errors of metabolism. Summer 2012, Winter 2012
22. Ocular manifestations of collagen vascular diseases. Winter 2012
23. Ocular manifestations of immunological disorders. Describe immunosuppressive drugs used in ocular disorders. Summer 2017
24. Wilson's disease. Summer 2013
25. Xanthelasma. Summer 2014
26. Ocular manifestations of exposure to radiation. Summer 2018

XVI. Lasers in ophthalmology

1. Discuss the use of lasers of eye. What are the latest advances in lasers? Uses of each laser ? Summer 2014,2017, Winter 2009
2. Excimer laser- Indications. Summer 2010
3. Femtolaser. Summer 2013, Winter 2010,2014,2015

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XVII. Ocular pharmacology and ocular side effects of systemic drugs

1. Atropine. Winter 2013
2. Newer generation quinolones. Winter 2013
3. New topical non-steroidal agents. Summer 2013
4. Chloroquine retinopathy. Summer 2016,2017,2018, Winter 2009
5. Adverse side effects of OCPs. Summer 2018
6. Ocular side effects of systemic drugs. Summer 2016.

XVIII. Community ophthalmology

1. Problems in eye camp. Summer 2013
2. Vision 2020. Summer 2015
3. Define primary eye care (PEC). Role of teleophthalmology in PEC. Summer 2017

XIX. Miscellaneous

1. Dyes used in ophthalmology. Fluorescein dye in ophthalmic practice. Summer 2018, Winter 2009,2014
2. What are the most common fungi affecting the eye? Describe briefly lesions caused by them and their management. Summer 2016
3. Hypotony. Winter 2014
4. Melanocytic lesions of eye. Summer 2016
5. Discuss suprachoroidal expulsive hemorrhage and it's management. Summer 2017

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