

STUDY GUIDE 4<sup>TH</sup> YEAT MBBS 2023-----2024  
AS PER GUIDE LINE UHS

THEME 1: BASIC ANATOMY AND PHYSIOLOGY OF THE EYEBALL AND ORBIT				
Topic	Objectives	Learning Outcome	MIT	Assessment Tools
1. Layers of the eyeball	1. Describe the three layers of eye ball.	L2	Lectures, Tutorials, Practicals	MCQ, SEQ, OSPE
2. Bony orbit	2. Understand the bony orbit in relation to nose and base of the skull.	L2		
3. Basic eye ball movements	3. Understand conjugate and dysjugate eye movements	L2		
4. Binocular single vision	4. Understand simultaneous perception,fusion,and stereopsis	L3		

THEME 2: ORBIT				
TOPIC.	OBJECTIVES	Learning outcome	MIT	Assessment tools
1. Bony orbit	1. Know the details of the bones forming the different walls of orbit. 1.1 Describe the openings in the orbit,optic foramen,superior orbital fissure,inferior orbital fissure.structures passing through the fissures and openings	L2  L3	Lectures Practicles Clinical wards	MCQ,SEQ,OSPE
2. Contents of the bony orbit	2. Understand the soft tissue of the orbit, cone of extraocular muscles.optic nerve leaving the orbit,3 <sup>rd</sup> ,4 <sup>th</sup> ,5 <sup>th</sup> ,6 <sup>th</sup> , cranial entering into the orbit	L3		
3. Preseptal cellulitis.	3. Describe the symptoms, signs differential diagnosis and investigations. 3.1.causes and treatment 3.2. complications	L3,L4		
4. Orbital cellulitis.	4. Enlist causes, relation with para sinuses , 4.1 learn the examination of orbit, 4.2 swelling of the orbit.lid	L3		

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<p>5. Proptosis</p>	<p>closure 4.3 examination of cornea 4.4 extra ocular muscles movements  5. Definition of proptosis. 5.1 understand the related history points 5.2 know the common causes like inflammation,tumour,infection 5.3 understand the axial non axialproptosis,impairing the functions of ophthalmic cranial nerves 5.4 Details of thyroid ophthalmopathy. 5.5 Know the relevant lab and radiological help. 5.6 Taking care of cornea and optic nerve functions</p>	<p>L3,L4</p>	<p>Lectures. Clinical rotations. Hand on learning on patients in opd</p>	<p>MCQ,SEQ,CBD,OSPE,</p>
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EME 3: LIDS				
TOPIC.	OBJECTIVES	Learning outcome	MIT	Assessment tools
anatomy and physiology of the lids	1. know the layers of lid special emphasis to the grey line 1.1. Understand the blink reflex.	L1	Lectures. Ward rotation OPD	MCQ,SEQ, OSPE
Blephritis	2. learn the history,clinical examination, differential diagnosis and treatment of infective, allergic and seborrhoeic anterior and posterior blephritis	L2,L3		
stye and chalazion	3. differentiate, and manage the stye and chalazion observe the surgical treatment 3.1 identify the complications	L3		
trichiasis, entropion, ectropion	4. understand the pathophysiology of the disease 4.1 learn the symptoms, signs, treatment and complications	L3		
ptosis	5. definition, causes, measurements, understand the time and type of operations	L3		
tumors	6. understand the histopathology of BCC,and SCC			

EME 4: CONJUNCTIVA.CORNEA. SCLERA				
TOPIC	OBJECTIVES	Learning outcome	MIT	Assessment tools
conjunctivitis	1. learn the causes symptoms, signs,clinical examination of the conjunctiva 1.1. understand the pathophysiology of allergic conjunctivitis		Lectures Clinical ward	

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	<p>1.2.enlist diagnostic signs of vernal catarrh and complications</p> <p>1.3. drugs for the treatment of allergic conjunctivitis</p> <p>1.4 describe the infective conjunctivitis,learn the differentiating clinical features between infective conjunctival conditions.</p> <p>1.5.define Pterygium</p> <p>1.6 understand the pathology</p> <p>1.7 symptoms, signs and surgical treatment of Pterygium</p>	L3	Operation theater	MCQ, SEQ, OSPE
CORNEA	<p>2. know the anatomy .histology. Know the physiology and factors which keep the cornea transparent</p> <p>2.1 history taking of patient having diseases of cornea</p> <p>2.2 describe the corneal ulcers dystrophies degenerations</p> <p>2.3 understand the preventive measures to protect the cornea from preventable diseases in the community</p> <p>2.4 describe the treatment, medical surgical(keratoplasty)</p> <p>2.5. know the uses of LASERS in corneal diseases</p>	L3	Lectures Tutorial Community Work OPD,OT	MCQ,SEQ, OSPE
CLERA	<p>3. understand episcleritis, scleritis ( rheumatology)</p>	L3		

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THEME 5: PUPIL				
TOPIC.	OBJECTIVES	Learning outcome	MIT	Assessment tools
1. normal pupil	1.know the normal size and shape of the pupil 1.1. normal pupillary light, direct, consensual, swinging light reflex, 1.2 pupillary pathway 1.3. near reflex.	L3	Hand on learning in the clinical rotation	Observed clinical test
2. abnormal pupil	2. RAPD. Light near dissociation, efferent pupillary defect	L3		

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TEME 6: LACRIMAL APPRARATUS

OPIC.	OBJECTIVES	Learning outcome	MIT	Assessment tools
lacrimal gland	1. know the clinical anatomy of lacrimal and accessory lacrimal gland.	L1	Lecture	MCQ
tear film	2. understand the different layers of tear film and the normal tear breakup time	L3		
lacrimal drainage stem	3. know the anatomy of punctum lacrimal sac nasolacrimal duct			
dry eye	3.1 define epiphora, learn regurgitation test, causes , diagnosis and treatment of epiphora in infants and elderly 4. understand the pathology of dry eye 4.1 describe stevens-johnson syndrome. 4.2.understand sjogren's syndrome	L3		

HEME7: THERAPEUTICS

OPIC.	OBJECTIVES	Learning outcome	MIT	Assessment tools
mydriatics	1. understand the pharmacokinetics of tropicamide, homatropine ,atropine, cyclopentolate,phenylephrine	L2	Lectures tutorials OPD	MCQ,OSPE
Meiotics	2.understands pilocarpine	L2		

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anesthetics agents	3. know uses of topical and infiltrative anesthetic agents like proparacain, lignocain, bupivacain	L2	OPD,OT	OSPE MCQ
broad spectrum antibiotics,antiviral	4.understand the antibiotics drug name dosage side effects, contraindications, indications			
anti inflammatory drugs	5. know the NSAIDS, STEROIDS,the pharmacokinetics contraindications, dosage, side effects.			
antiviral drugs	6.understand different groups of antiviral and specific antiviral drugs in ophthalmology			
systemic antiglaucoma drugs	7. know the pharmacokinetics of carbonic Anhydrase inhibitor and 20% manitol.			
dyes	8. know topical use of Rose Bengal and Fluorescein topical and inject able			

ME 8. UVEAL TRACT

C. a	OBJECTIVES	Learning outcome	MIT	Assessment tools
full red eye	1. understand the anatomy and physiology of Iris, Ciliary body, Choroid. 2. understand the clinical presentation of painful red eye due to Iritis, Iridocyclitis, Panuveitis, Choroiditis, cyclitis. 2.1 know nongranulomatous and Granulomatous types of uveitis. 2.2learn clinical classification of uveitis .2.3 know the torch light clinical signs of anterior uveitis. 2.4.understand the anterior chamber signs of anterior uveitis 2.5. differential diagnosis of uveitis.	L3	Lectures OPD	MCQ, OSPE
s treatment and nic association	3. understand the immunity, systemic association of uvea and treatment	L2,L3		MCQ.OSPE
		L2,L3		MCQ,OSPE

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HEME 9: LENS

TOPIC.	OBJECTIVES.	Learning outcome	MIT	Assessment tools
cataract.	1.understand the causes of cataract,classification of cataract. 1.1.definition of Phakia, aphakia ,pseudophakia 1.2.learn the history,clinical signs of cataract. 1.3know the metabolic causes, 1.4.understand the traumatic,and secondary causes of cataract. 2.learn the management of child hood cataract including the visual rehabilitation after treatment of cataract. 3.understand the clinical examination of a patient presenting with gradual painless decrease in vision 3.1learn history taking,preoperative evaluation of patient(macular function test,pupillary light reflex ) 3.2.know different surgical treatment of cataract. 3.3.complication of mature cataract. 3.4learn complication of cataract surgery.(per operative early post operative, late post operative complication) 3.5.understand the management of complicated hypermature cataract 3.6.learn the management of post operative complication 4.understand abnormalities in the shape of lens, know the features of Marfan's Syndrome	L3	Lectures ,pictures tutorials Clinical rotation. OT	MCQ,SEQ,OSPE,VIVA,PRACTICALS
child hood cataract.				
senile cataract				
Ectopia lentis				

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THEME 10.GLAUCOMA				
TOPIC	OBJECTIVES	Learning outcome	MIT	Assessment tools
1.angle of the anterior chamber(AC)	1.know the detail anatomy of angle of the anterior chamber(AC).	L1,L2	Lectures Pictures Tutorials Clinical rotation	MCQ,SEQ, OSPE
2.aqueous humor.	1.1understand the method of visualization of angle of AC (goneoscopy) grading of angle width.			
3.IOP.	2. know the production of aqueous humor and circulation of aqueous humor.	L1,L2		
4.pathophysiology of glaucoma.	3.learn the definition of IOP, know the methods of measurement of IOP, applanation and schiotz tonometry, perkins tonometry			
5.managment of glaucoma.	4.describe the classification of glaucoma.			
6.painfull red eye.	4.1understand pathophysiology of primary open glaucoma.			
7.congenital glaucoma.	4.2. understand secondary open angle glaucoma.			
8.peri metery	4.3.causes of narrow angle glaucoma.			
	4.4learn the history taking of glaucomas, clinical examinations (perimetry), optic disc changes.			
	5.medical management antiglaucoma drugs.			
	5.1laser treatment .			
	5.2 surgical treatment(Trabeculectomy).			
	5.3 complications of surgical treatment.			
	6. understand the symptoms signs and emergency management of acute angle closure glaucoma.			
	6.1know the Neovascular glaucoma			
	7. understand the causes of bhupthalmos			
	8. describe field defects in glaucoma			

THEME 10: VITRO- RETINA

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TOPIC.	OBJECTIVES	Learning outcome	MIT	Assessment tools
1.PVD	1.understand the normal attachment of vitreous body.	L2	Lectures Clinical rotations	MCQ
2.hypertensive retinopathy	1.1 learn the symptoms sign and complications of PVD. 2.describe the pathophysiology of hypertensive retinal changes 2.1 understand the classification of hypertensive retinopathy 2.2 learn retinal vein occlusion 2.3 learn retinal artery occlusion 2.4 understand the complications of retinal vascular lesions	L2,L3		MCQ,SEQ,OSPE
3.diabetic retinopathy	3. understand the classification of diabetic retinopathy 3.1 learn the symptoms signs specific investigation(FFA,OCT,PERIMETRY) 3.2 understand the specific treatment Like retinal photocoagulation.	L2,L3		MCQ,SEQ,OSPE
4. retinal detachment.	4.understand the definition of RD,causes, symptoms,signs, detail clinical examination. 4.1learn the surgical treatment 4.2 know the names of surgical methods of retinal detachment			
5.retinitis pigmentosa	5. define retinitis pigmentosa 5.1 know the genetics 5.2 understand the symptoms sign clinical examination(ophthalmoscopy, Perimetry) 5.3 complications			
6. retinoblastoma	6. define retinoblastoma 6.1 know the genetics 6.2 understand the clinical presentation 6.3 know the management			

HTEME 11.THEME OPTIC NERVE

TOPIC	OBJECTIVES.	Learning outcome	MIT	Assessment tools
1.papilloedema	1.know the CSF circulation. 1.1 define papilloedema 1.2 know the causes of papilloedema. 1.3learn the causes,symptoms sign And relevant investigation			
2.optic neuritis .	2. understand the causes,			

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3. retrobulbar neuritis  4.optic atrophy. 5.visual pathways.         6.3 <sup>rd</sup> ,4 <sup>th</sup> ,6 <sup>th</sup> ,5 <sup>th</sup> ,7 <sup>th</sup> ,cranial nerves	symptoms,signs, investigations and treatment 3.define retrobulbar neuritis drugs causing it. 4.definition causes, clinical sign. 5.know the normal neuroanatomy of visual pathway, relations of optic chiasma with pituitary gland. 5.1 optic tract, lateral geniculate body, optic radiation and visual cortex 5.2 understand the field defects due to lesion at different levels of lesions in the visual pathway. 6.know the clinical anatomy of these cranial nerves. 6.1 understand the symptoms signs and causes of cranial nerve paralysis			
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ME 11. TRAUMA

TOPIC.	OBJECTIVES.	Learning outcome	MIT	Assessment tools
1. foreign body.  2. globe injuries  3. chemical injuries  4. sympathetic ophthalmitis	1.learn to examine the eye to find out corneal, conjunctival and Sulcus subtarsalis FB. 1.1know the intra ocular FB. 2. close and open globe injuries  3. understand acid and alkali burns 3.1 industrial hazards 4. define sympathetic ophthalmitis 4.1 learn history clinical examination investigation and treatment of the disease	L2,L3	Lectures Opd clinical pictures	MCQ,SEQ,OSPE

TEME 12 SQUINT

TOPIC.	OBJECTIVES	Learning outcome	MIT	Assessment tools
1.anatomy and physiology of extra ocular muscles.	1.know the detail anatomy of extra ocular muscles. 1.1learn axis of rotations.			

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BSV 1. Amblyopia.  squint       errors of refraction	1.2understand hering law sherigten law for muscles rotation. 2.understand the grades of BSV. 3.defination of management of amdlyopia. 4.understand pseudosquint, history taking of squint 4.1causes of squint 4.2 understand detail examination of squint 4.3 understand the surgical of nt 5. know the normal optical system Of eye 5.1defination of emmtropia,myopi Hypermetropia,astigmatism, Presbyopia 5.2 know the definition of Phakia Pseudophakia, aphakia , 5.3 lasers in refractive errors	L3	Lectures Clinical rotations	SEQ,MCQ,OSPE
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