4th Year MBBS(0phthalmology), AFM&DC

STUDY GUIDE

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INTRODUCTION

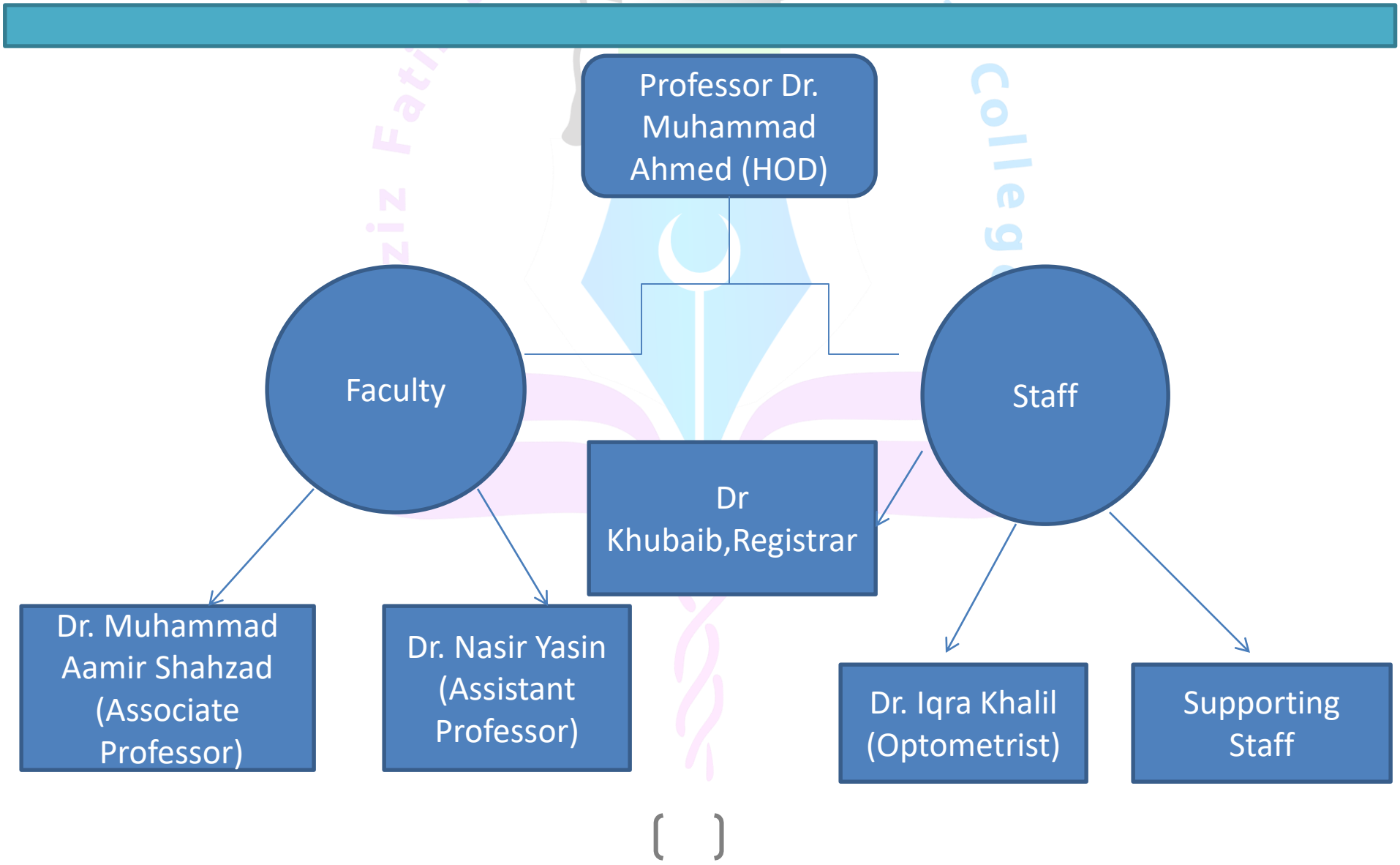
Ophthalmology [of″thal-mol´ŏ-je] is the branch of medicine that deals with the diagnosis and treatment of diseases and disorders of the eye.

The Department of Ophthalmology, Aziz Fatimah Medical and Dental College is involved in teaching and training of 4th year MBBS students through lectures, presentations, ward and clinical classes in the subject. Department is well-equipped with latest facilities. Almost all types of eye surgeries are being performed in this department like Phaco-emulsification (cataract) surgery,Scleral fixation Glaucoma surgery, Vitrectomy, RD surgery,Optic nerve fenestration, Amniotic membrane grafting, Oculoplastic (squint surgery, levator resection, D.C.R. with intubation) .The Department of ophthalmology provides daily outpatient facility and all eye operations by well reputed Eye Specialists. Hospital is Teaching team of Department of Ophthalmology is committed for better training of its under-graduate.

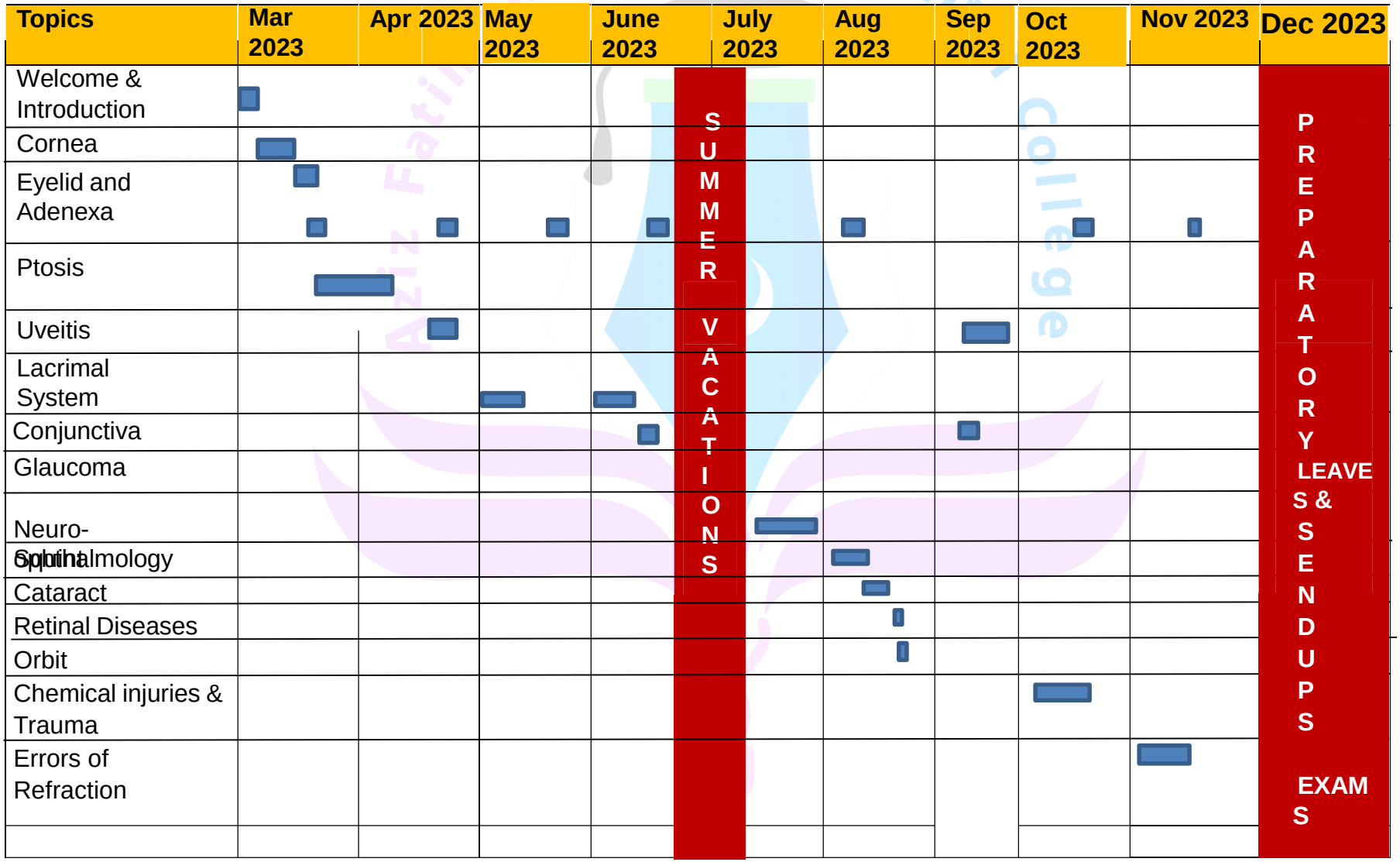
The Close and excellent student-teacher relationship is maintained. The teaching is done using the most modern methods i.e. with the help of latest audiovisual aids like multimedia & projectors, and clinical classes, achieving excellent results. Since teaching is ongoing process, the faculty members participate in various workshops and seminars which are supervised by experts of national repute to refresh and update their knowledge. Research has already been made compulsory for the students of 4th Year MBBS by UHS, so the students are trained for actively writing research papers by giving them regular assignments having reference from most modern journals under supervision of our staff members.

Day	Weekly Break up of Lectures and Tutorials			
	1	2	3	4
	8:00 am – 8:45 am	**8:45 am - 9:30 am**	**11:15 am – 12:00 pm**	**12:00 pm – 2:00 pm**
Monday			Lecture	Ward Class
Tuesday				Ward Class
Wednesday				Ward Class
Thursday	Lecture			Ward Class
Friday	Lecture			

DEPARTMENT ORGANOGRAM



Gantt's Chart for syllabus completion



Learning Objectives

LEARNING OBJECTIVES OF OPHTHALMOLOGY

FOURTH YEAR M.B.B.S

TOPIC	LEARNING OBJECTIVES
EYELIDS	Elaborate clinical features and management plan of Blepharitis, Stye, Chalazion, Trichiasis, Entropion, Ectropion, Ptosis and common eyelid tumors
	Examine eyelids with torch
	Demonstrate professional responsibility in dealing with the patients of Chalazion &Trichiasis.
CONJUNCTIVA	Have adequate knowledge of different types of Conjunctivitis and conjunctival degenerations
	Have basic skill of examination of the conjunctiva including eversion of eyelids with accuracy and integrity in all interactions with patients
	Know clinical features and treatment of Trachoma and Pterygium
	Be vigilant in washing hands after examining a patient and should explain precautionary measures to the patients to prevent spread of infection in an effective manner
CORNEA	Elaborate clinical features and formulate a management plan of corneal infections
	Examine anterior segment of the eye including corneal ulcers with torch and corneal staining with fluorescein
	Demonstrate professional responsibility of washing hands in dealing with the patients of corneal infections
LACRIMAL APPARATUS	Be acquainted with Composition and functions of Tear film and diagnose patients of epiphora and dry eye
	Know Clinical features of dacryocystitis and plan management of acute and chronic Dacryocystitis
	Have adequate knowledge of causes and primary care management of dry eye
	Perform regurgitation test
SCLERA AND EPISCLERA	Recognize the risk factors and clinical features of episcleritis and scleritis
	Examine a case of red eye and develop a differential diagnosis including episcleritis and scleritis

ORBIT	Comprehend the causes of Proptosis
	Have sufficient knowledge to elicit signs of Thyroid eye disease and plan primary care management
	Have sufficient knowledge of clinical features, investigations and management plan of Pre-septal Cellulitis and Orbital cellulitis
	Examine a case of thyroid eye disease
	Examine a case of orbital and pre-septal cellulitis
	Know the definition and clinical features of blow out fracture of orbit.
	Conduct relevant tests related with blow out fracture
UVEITIS	Have sufficient knowledge of anatomy of uveal tissues and classification of uveitis.
	Be familiar with clinical features, treatment and complications of anterior uveitis.
	Examine a case of red eye and form a differential diagnosis with reference to uveitis.
	Have special consideration regarding washing hands after examination of a patient with red eye to prevent spread of communicable diseases of eyes.
LENS	Integrate sufficient knowledge into practice for assessment & management of cataract
	Recognize the complications of cataract surgery especially emergency management of Endophthalmitis
	Be aware of the causes of leucocoria with special reference to congenital cataract
	Have basic knowledge of causes of ectopia lentis and its systemic associations
	Examine lens (cataract and ectopia lentis) with torch
	Perform distant direct ophthalmoscopy and interpret its findings
GLAUCOMA	Attain adequate knowledge of raised intraocular pressure and classification of glaucoma.
	Be able to differentiate POAG from PACG.
	Have sufficient knowledge of clinical features of PACG.
	Be able to Predict causes of secondary glaucoma occurring as a complication of mature cataract and uveitis.

	Comprehend the clinical features of Buphthalmos and its differential diagnosis.
	Be able to perform digital Tonometry and document findings.
	Be able to explain vision loss to the patient and family in case of absolute glaucoma.
NEURO-OPHTHALMOLOGY	Remember Pupillary reflex pathway and its abnormalities.
	Differentiate between different types of optic atrophy and perceive abnormalities of visual pathway.
	Attain sufficient knowledge of optic disc edema and should be able to differentiate optic neuritis from papilledema.
	Check optic nerve function and confrontation visual fields.
	Illustrate pupillary reflexes and interpret its findings.
SQUINT	Have sufficient knowledge of extra ocular muscles and their actions
	Be able to classify squint
	Be able to perform extra ocular movements in an effective manner.
	Define amblyopia and create plan for its management
	Have ability to explain to the patient and family about the significance of amblyopia treatment and complications of non-compliance
	Be able to perform Hirschberg test and predict its findings
VITREOUS RETINA	Acquire basic knowledge of causes and clinical features of retinal detachment and diabetic retinopathy
	Be able to identify the symptoms and signs of hypertensive retinopathy, CRVO and CRAO for referral to the ophthalmologist
	Have adequate knowledge of Leucocoria especially in reference to Retinoblastoma, its clinical features and differential diagnosis
	Be able to convey the importance of treatment of Retinoblastoma and show empathy to the family
	Recognize the clinical features of Retinitis Pigmentosa and be able to convey the consequences of family consanguinity to the family
	Have basic knowledge of clinical features and management of ROP

	Be familiar with uses of direct and indirect Ophthalmoscopy
OCULAR TRAUMA	Acquire basic knowledge of ocular manifestations of blunt trauma
	Be able to identify the symptoms and signs of penetrating injuries of the eyeball and know when to refer the patient to the ophthalmologist
	Have adequate knowledge of chemical injuries with ability to properly irrigate the eye in primary care settings
	Be able to remove superficial conjunctival foreign bodies
	Know clinical features of Retinitis Pigmentosa and be able to convey the consequences of family consanguinity in hereditary eye diseases
	Have basic knowledge of clinical features of ROP and should recommend management plan for ROP
	Be familiar with uses of direct and indirect Ophthalmoscopy
ERRORS OF REFRACTION	Know causes, clinical features and visual rehabilitation of aphakia
	Be able to differentiate between myopia, hypermetropia and astigmatism and be familiar with corrective lenses
	Be able to check visual acuity for distance and near. .
	Be able to perform pinhole test and comprehend the significance of its findings
	Should be familiar with Retinoscopy and should be able to interpret its findings
VITAMIN A DEFICIENCY	Diagnose and plan management for ocular manifestations of Vitamin A deficiency
	Be able to effectively use torch to identify Bitot's spots

0PHTHALMOLOGY (SEQs and MCQs)

TABLE OF SPECIFICATIONS

Table of specifications for the MCQ examination:

Total marks: 45. Total number of questions: 45

Sr. #	Topics	C1	C2	Weighting	% of items and marks per content
1	Basic Concept of anatomy and the functions of the Eyeball and Orbit	✓	✓	1MCQ	2 % (1 MCQ = 1 Mark)
2	Orbit: Orbital Cellulitis, Proptosis	✓	✓	2 MCQs	5% (2 MCQs = 2 Marks)
3	Cornea				
	3.a Bacterial Keratitis	✓	✓	2 MCQ	5% (2MCQs = 2 Marks)
	3.b: Fungal Keratitis	✓	✓	1 MCQ	2% (1 MCQ = 1Mark)
	3.c: Viral Keratitis	✓	✓	1 MCQ	2 % (1 MCQ = 1 Marks)
	3.d: Protozoal Keratitis	✓	✓	1 MCQ	2 % (1 MCQ = 1 Mark)
4	Conjunctiva: Infective and Allergic Conjunctivitis, Pterygium.	✓	✓	2 MCQs	5% (2 MCQs =2 Marks)
5	Sclera :Episcleritis and Scleritis	✓	✓	1 MCQ	2 % (1 MCQ = 1 Mark)
6	Lacrimal system: Composition and function of Tear film, Dry Eye Excessive watering (Epiphora), Dacryocystitis (Acute & chronic).	✓	✓	1 MCQ	2 % (1 MCQ = 1 Mark)

Sr. #	Topics	C1	C2	Weighting	% of items and marks per content
7	Therapeutics: Drugs used in common ophthalmic conditions	✓	✓	4 MCQs	9 % (4 MCQs = 4 Marks)
8	Uveal Tract: Uveitis, and its differential diagnosis from other causes of the Red Eye	✓	✓	3 MCQs	7 % (3 MCQs = 3Marks)
9	Lens: Classification of cataract, congenital Cataract (lamellar, signs and symptoms and management), Rubella syndrome, Acquired Cataract (senile, traumatic, drug induced), cataract due to systemic diseases	✓	✓	5 MCQs	11 % (6 MCQs = 6 Marks)
10	Glaucoma: Definition & classification of glaucoma primary open angle and closed angle glaucoma secondary glaucoma	✓	✓	5 MCQs	11 % (5 MCQs = 5 Marks)
11	Vitro-Retina: Posterior vitreous detachment, primary retinal detachment (common presentation and principle of management)	✓	✓	4 MCQs	9 % (4 MCQs = 4 Marks)
12	Optic Nerve: Papilloedema, Optic Neuritis (Papillitis and Retrobulbar Neuritis), Optic Atrophy	✓	✓	4 MCQs	9 % (4 MCQs = 4 Marks)
13	Visual Pathway: Introduction to Visual Field defects in the lesions of Chiasma and visual Pathway	✓	✓	3 MCQ	7 % (3 MCQs = 3 Marks)
14	Injuries: Extraocular Foreign Bodies, Closed globe injuries, Open globe injuries with or without retained Intra ocular foreign bodies burns and Chemical Injuries sympathetic Ophthalmitis.	✓	✓	2 MCQ	5 % (2 MCQs = 2 Marks)
15	Errors of Refraction: Introduction to Optical System of Normal Eye Emmetropia, Myopia, Hypermetropia, Astigmatism, Presbyopia, Aphakia, Pseudophakia, Anisometropia and Amblyopia.	✓	✓	2 MCQs	5% (2 MCQs = 2 Marks
16	Squint and Amblyopia: Definition, Classification and Principle of Management.	✓	✓	1 MCQ	2% (1 MCQ = 1 Mark)

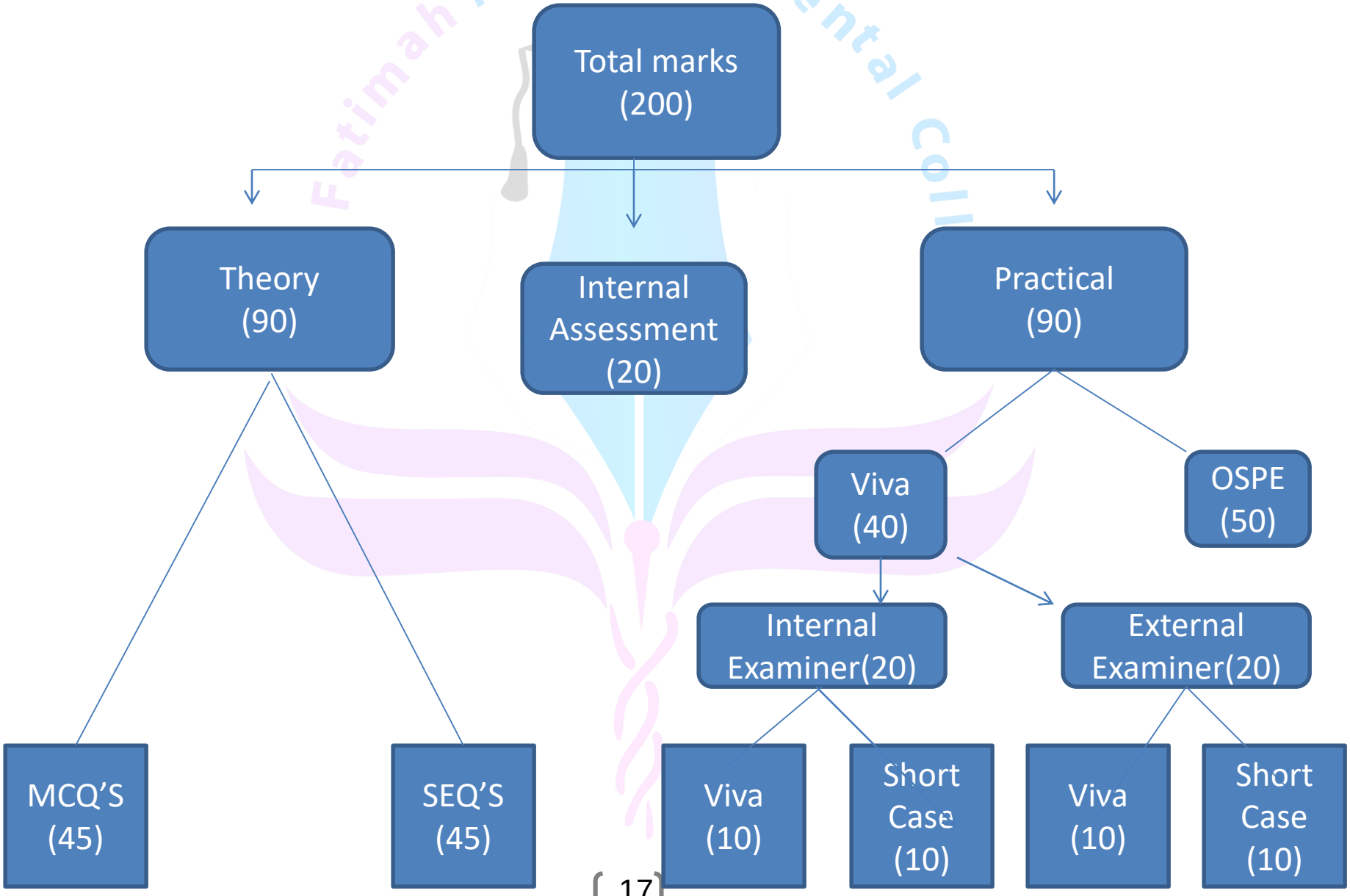
Table of specifications for the SEQ examination:

Total marks allocated: 4 5 Total questions: 09

Sr. #	Topics	C1	C2	Weighting	% of items and marks per Content
1	Anatomy and the functions of the Eyeball and Orbit	✓	✓	1SEQ	11.11% (1 SEQ = 5 Marks)
2	Orbit and Neurophthalmology	✓	✓	1 SEQ	11.11% (1 SEQ = 5 Marks)
3	Lids and Conjunctiva and Lacrimal system	✓	✓	1 SEQ	11.11% (1 SEQ= 5 Marks)
4	Cornea	✓	✓	1 SEQ	11.11% (1 SEQ = 5 Marks)
5	Lens	✓	✓	1 SEQ	11.11% (1 SEQ = 5 Marks)
6	Glaucoma	✓	✓	1 SEQ	11.11% (1 SEQ = 5 Marks)
7	Vitreo-retina: Diabetic retinopathy, Retinal detachment, ARMD, etc.	✓	✓	1 SEQ	11.11% (1 SEQ = 5 Marks)

Sr. #	Topics	C1	C2	Weighting	% of items and marks per Content
8	Uveal Tract and Therapeutics	✓	✓	1 SEQ	11.11% (1 SEQ = 5 Marks)
9	Neurophthalmology, Squint, Errors of Refraction and Chemical injuries	✓	✓	1 SEQ	11.11% (1 SEQ = 5 Marks)

EVALUATION METHOD
4th year MBBS Professional Examination



Format for OSPE in Ophthalmology

MBBS Fourth Professional Examination

OSPE Distribution (For each cycle)

- **OSPE stations in total** — **15**
- **One rest station**
- **Interactive stations** — **04**
  - Marks at each station — 10
  - Time at each station (mins) — 04
  - Human resources — 01 Internal
01 External
02 local observers
  - Total marks — 40
- **Static (non observed) Stations** — **10**
  - Marks at each station — 05
  - Time at each station (mins) — 04
  - Total marks — 50

Marking system OSPE Examination

- Total marks clinical — 100
- OSPE total marks — 90
- Internal assessment — 10

Detailed distribution of ophthalmic topic to be covered in non interactive OSPE
Set of 10 static OSPE stations

Sr. No	Subject/Topic	OSPE questions	Percentage
1.	Lid/Adnexa	01	10%
2.	Conjunctiva /Sclera	01	10%
3.	Cornea/Refractive Errors	01	10%
4.	Orbit/Lacrimal apparatus	01	10%
5.	Lens	02	20%
6.	Glaucoma	01	10%
7.	Retina/ Optic Nerve/ Vitreous Humor	01	10%
8.	Medical Ophthalmology / Uveitis	01	10%
9.	Neurophthalmology/Injuries/Strabismus	01	10%
	Total OSPE question	10	100%

Teaching Methodology

Class Lectures using Multi- media -interactive
Ward Clinical Training : History taking/ Clinical case andClinical Methods/
Case teaching on Digital Slit-Lamp,
Rotation to Operation Theatre for Surgery Observation/ Introduction to surgical instruments

REFERENCE BOOKS

(as listed in the UHS curriculum)

1. Parson's Diseases of the Eye by Ramanjit Sihala and Radhika Tandor. 3rd Ed
2. Ophthalmology by Renu Jogi
3. Clinical Textbook of Ophthalmology by Dr. Saleem Akhter
4. Kanski's Ophthalmology
5. Ophthalmology Principles and Concepts Newill F. W.
6. Online Journals and Reading Materials through HEC Digital Library Facility