POST GRUADUATE M.S. DEGREE COURSE IN OPHTHALMOLOGY-BRANCH-III TRAINING PROGRAMME

FIRST YEAR

Out Patient and Casualty	:	6 months
In Patient and O.T.	:	6 months

SECOND YEAR

Cornea Clinic	:	1 month
Glaucoma Clinic	:	1 month
Neuro Ophthalmology Clinic	:	1 month
Orbit Clinic	:	15 days
Orthoptic Clinic	:	1 month
Retina Clinic	:	1 month
Uvea Clinic	:	15 days
Refraction Room	:	2 months
Eye campus & Community Ophthalmology	:	1 month
Out Patient	:	3 months

Total	:	12 months

THIRD YEAR

Inpatient & O.T.	:	12 months

M.S. POST-GRUADUATE DEGREE COURSE IN OPHTHALMOLGY-BRANCH-III
SCHEME OF EXAMINATION

Distribution of Marks :

Part-I (At the end of First Year)

Theory	Title	Duration In Hours	Maximum marks
Paper-I	Applied Basic Sciences****(relating to Ophthalmology)	3	100

- Examination in theory relating to Head and Neck only be conducted for M.S. (Ophthalmology) in General Surgery paper and there is no need for any clinical or oral Examination. 9S.A.B.22-02-1995)

Marks Qualifying for a Pass:-

50% of marks in the University Theory Examination – (paper-1 Applied Basic Sciences): 50/100

The applied Basic Science paper will be evaluated separately and marks qualifying for a pass shall be 50% of the total prescribed. (100 marks)

Part-II (At the end of Third year)

Theory	Title	Duration In Hours	Maximum marks
Paper-I	Ophthalmology including Community Ophthalmology & Refraction	3	100
Paper-II	Ophthalmology including Neuro Ophthalmology	3	100
Paper-III	Ophthalmology including Investigative Ophthalmology & Surgery	3	100
	Total		300

Clinical Examination :

	No. of cases	Marks
1. Long Case	One	80
2. Short Case (2 x 40 marks)	Two	80
3. Retinoscopy (10 Minutes)	One	20
4. Funduscopy (10 Minutes each)	Two	20
	Total	200

VIVA VOCE EXAMINATIONS TOTAL MARKS: 100

1.	OSCE	50
2.	Log Book (Evaluation & Questioning)	20
3.	Orals on Recent Advances	30
	Total	100

1. OSCE (Objective Structural Clinical Examination)
   Marks (10x5):50

Based on Objective Structured Exam Stations:

S. No.	Stations	Marks
1.	Neuro Anatomy of Eye	05
2.	Physiology & Biochemistry Applied	05
3.	Microbiology Slides	05
4.	Pathology Slides	05
5.	Pharmacology	05
6.	Equipments	05
7.	Investigations	05
8.	Imaging (Scan, Xray, Ultrasound, CT, MRI)	05
9.	Clinical Cases / Video of Surgical Procedure	05
10.	Surgical Instruments	05
		50

NOTE: Serial No. 1 to 10 should be common to all the candidates appearing on that day.

2. Log Book (Evaluation and questioning Marks : 20
3. Oral on Recent Advances Marks : 30

THESIS: Marks: 100

PASS

Minimum for Pass:	Clinical Examinations	VIVA	Thesis
Maximum	200	100	100
Minimum	100	50	50

Candidates must pass each component separately. Even if a candidate fails in one component, the candidate is deemed to fail in the whole examination.

M.S. POST-GRUADUATE DEGREE COURSE IN OPHTHALMOLGY-BRANCH-III

RECOMMENDED LIST OF TYEXT BOOKS AND JOURNALS

TEXT BOOKS :

1. American academy of ophthalmology series
2. Principles and Practice of Ophthalmology by Peyman
3. Parsons diseases of the eye
4. Clinical Ophthalmology – Kanski
5. Diagnosis and Therapy of Glaucoma - Becker-Shaffers 8th edition
6. Clinical Neuro – Ophthalmology – Walsh and Hoyt's
7. Dieseases of Eye-May and Worth
8. Cataract Surgery & its Complications by Jaffe
9. Stallard's Eye Surgery
10. Practical orthoptics in the treatment of squint-Keith Lyle
11. Refraction – Duke Elder
12. Cornea – Gilbert Smolin Richard A.Thoft

REFERENCE BOOK :

1. The Cornea – H.E Kaufman
2. Retina – Stephen J.Ryan
3. System of Ophthalmology- Duke Elder
4. Simplifying Phacoemulsification Safe & efficient methods for cataract surgery – Paul S.Koch 5th edition

5. Vitreoretinal surgical techniques 2nd edition – Gholam A Peyman, Stephen A Meffert, Mandi D Conway
6. Multifocal IOLs - Frank Joseph, Goes.
7. Phakic IOL, Principles & Practice – David R Handsen, Richard L. Lundstorm
8. Pediatric Ophthalmology and Strabismus 3rd edition – David Taylor, Creig.S.Hoyt
9. Principles & Practice of Ophthalmology 3rd edition – Albert & Jakobiec's, Albert, Miller, Azar & Blodi.
10. Manual of Oculoplastic Surgery 3rd edition – Mark R Levine
11. Mastering the Techniques of LASIK, EPILASIK, LASEK – Techniques & Technology – Ashok Garg, Jorge L Alio, Bojan Pajic, Cyres K Mehta.
12. Atlas of Refractive Surgery – Benjamin F Boyd

JOURNALS

1. British Journal of Ophthalmology
2. American Journal of Ophthalmology
3. Indian Journal of Ophthalmology
4. Eye Journal Ophthalmology
5. Survey of Ophthalmology
6. IOC
7. Archives of Ophthalmology
8. Ophthalmol

UP-DATED CORE SYLLABUS
M.S. OPHTHALMOLOGY (Basic Sciences – Applied)

ANATOMY :

Anatomy of lids Lacrimal passage, extra ocular muscles, Cornea, Angle of Anterior for chamber, uveal tract, Lens, Vitreous, Retinal, Opti nerve and visual pathway.

Developmental Anatomy of the Eye.

Bony orbit spaces of orbit and cranial fossa, cavernous sinus – paranasal sinuses, Blood supply to eye and adnexa: blood supply of visual pathway – circle of Willis.

Cranial nerves, parasympathetican sympathetic supply to the Eye-ventricles of Brain.

PHYSIOLOGY :

Maintenance of corneal transparency
Lacrimal secretion and tear film layer.
Formation and circulation of Intra ocular fluids.
Maintenance of Intra ocular tension.
Pupillary reaction and their pathway.
Pupillary reflexes
Theories of Accommodation
Accommodation – convergence – relationship
Blood Aqueous Barrier
Physiology of Vision

Theories of color vision
Binocular vision
Blood Retinal Barrier
Electrophysiology.
Axonal transmission of impulses.
Visual perception of cerebral cortex.

BIOCHEMISTRY
Carbohydrate metabolism
Metabolic disorders of lipids
Amini acid-normal and Abnormal Metabolism
Metabolism of cornea
Metabolism of crystathine lens
Biochemical changes of lens leading autocataract
Photo chemistry of vision
Structure and Metabolism of vitreous

PHARMACOLOGY :
Miotics, Mydriatics – Cycloplequics
Parasympatholytic drugs
Cholinergic drugs
Sympathomimetic drugs
Sympatholytic drugs
Penetration of topically applied drugs
Teat replacement substances
Drugs Penetration of Blood aqueous barrier
Principles of Cortisone therapy
Principles of antibiotic therapy
Fluroscein dye
Anticoagulants
Antiviral drugs

Antifungal drugs
Immune suppressive drugs
Vasodilators

Drugs used in Glaucoma
Anti-neoplastic agents.

Preanaesthetic medication
Topical anaesthesia
Local anaesthesia
Anti diabetic drugs
Anti hypertensive drugs
Shock therapy
Vitreous substitutes and aqueous substitute

PATHOLOGY
General consideration of Inflammation of the Eye and Adnexa Vascular changes in Age, hypertension and Diabetes
Benign And Malignant tumors of the Eye and Adnexa

Dystrophy & Degeneration of the conjunctiva
Cornea and Retina
Metabolic diseases
Fungal Granuloma

AIDS
MICROBIOLOGY :
General Microbiological characteristics of Bacteria, viruses,
Fungi and parasites
Resistance and immunity, Antigen antibody reaction
Toxigenicity and hypersensitivity reaction
GRAM Positive Group:
Staphylococci, Streptococci, Pneumococci Corynebacterium
Diphtheria C Xerosis

GRAM Positive Group:

Neisseria, Moraxella, Koch Weeks Bacillus Brucella,
Pseudomonas
Mycobacteria and Micrococcacia

Viruses :

Trachoma an Inclusion Conjunctivitis adenoviruses
Herpes simplex
Herpes Zoster
AIDS Viruses

Fungi
Aspergillus
Fusarium
Candida
Demeticious fungus
Parasites :
-Cysticercus
-Hydatid Cyst
-Loa loa
-Microfilaria
-Intestinal nematodes