

Optometry Syllabus for PhD Entrance

Unit I: Community Eye Health:

- Causes for vision Impairment-Childhood blindness, Refractive errors and presbyopia, Age related cataract, Low Vision, Diabetic retinopathy, Glaucoma, Age related Macular Degeneration, Vitamin A deficiency, Corneal and external diseases

Unit II: Optometric clinical Investigation

- Visual acuity estimation , Extra ocular motility, Cover test, Alternating cover test, Hirschberg test, Modified Krimsky, Pupils Examination, Maddox Rod
- **Van Herrick**- External examination of the eye, Lid Eversion ,Schirmer's, TBUT, tear meniscus level, NITBUT (keratometer), Color Vision, Stereopsis, Confrontation test
- Photostress test, Slit lamp biomicroscopy, Ophthalmoscopy, Tonometry, ROPLAS, Amsler test.
- All Objective method of refraction

Unit III: Contact Lens

- Introduction to Contact lenses
- Types of contact lens & their properties
- Contact Lens complications & management
- Common Handling Instructions
- Care & maintenance

Unit IV: Ocular Diseases and Diagnostics

- Slit Lamp,
- Ophthalmoscopy,
- Specular Microscopy,
- Topography,
- Pentacam,Pachymetry ,
- AS OCT,
- Gonioscopy, Fundus Photography,
- Cataract evaluation
- Perimetry

Unit V: Binocular Vision

- **Anatomy of Extra Ocular Muscles:** Rectii and Obliques, LPS, Innervation & Blood Supply, Physiology of Ocular movement, Action of individual muscle, Laws of ocular motility, Donders and Listing's law, Sherrington's law, Hering's law, Unocular & Binocular movements - fixation, saccadic & pursuits, Version & Vergence.
- **Near Vision Complex Accommodation:** Types of accommodation, Anomalies of accommodation
- **Convergence-** Definition and mechanism, Methods of measurement, Types and components of, convergence
- Nystagmus

- Squint