

FURTHER DETAILS REGARDING MAIN TOPICS OF PROGRAMME No. 01 A/2020

OPTOMETRIST IN HEALTH SERVICES (Category No.217/2018)

1. ANATOMY OF THE EYEBALL

- Coats of the eye & section of the eyeball
- Anatomy of conjunctiva, sclera & cornea
- Anatomy of uveal tract. lens, retina
- Ocular muscles and orbital walls
- Anatomy of eyelids
- Anatomy of lacrimal apparatus
- Names of cranial nerves with more stress to II,III,IV,V,VI&VII cranial nerves and their specific role in vision, ocular and lid movement

2. MICROBIOLOGY

- Various organisms responsible for ocular diseases - bacteria , viruses fungi & parasites.
- Common microbiological investigations (culture, smears & staining)

3. PHYSIOLOGY OF VISION

- Visual acuity and color vision
- Aqueous humour formation and circulation
- Intraocular pressure maintenance
- Physiology of ocular movements
- Physiology of binocular single vision
- Physiology of accommodation & convergence

4. VISION TESTING

- Principles of vision testing using Snellen's chart
- Vision testing in adults, illiterates, infants and children
- Colour vision testing
- Near vision testing

5. REFRACTION & RETINOSCOPY

- Retinoscopy principles and optics
- Practical retinoscopy and calculation
- Difficulties in retinoscopy
- Cycloplegic refraction & Post mydriatic test
- Prescription writing
- Streak retinoscopy
- Autorefractometer

6. OPTICAL SYSTEM OF NORMAL & ABNORMAL EYE

- Optics of normal eye, Refractive errors & its optics (Myopia, Hyperopia, Astigmatism, Presbyopia & Aphakia)
- Contact lens
- Accommodation & Convergence
- Anomalies of accommodation and convergence

7. SPECTACLES AND INTRAOCULAR LENSES

- IPD measurement , Fitting / adjustment of spectacles , Transposition
- Intraocular lens , Intraocular power calculation
- Bifocals, multifocals and progressive glasses
- High index aphakic glasses

8. OPHTHALMIC EQUIPMENTS & INSTRUMENTS

- Trial set , Retinoscope , Jackson's cross cylinder, Autorefractometer
- Keratometer , Placido's disc , RAF rule
- A scan , Humphrey field charting , Tonometer
- Fundus camera
- Maddox rod , Synoptophore , Hess screen

9. PHYSICS OF OPTICS

- Law of reflection & refraction
- Spherical and cylindrical lenses
- Prisms

10. OCULAR PHARMACOLOGY

- Common antibiotics, antifungals & antivirals used in Ophthalmology
- Antiglaucoma drugs , Cycloplegic drugs , Lubricating drugs
- NSAIDs & Steroids

11. COMMON DISEASES OF

- Orbit
- Eyelid
- Lacrimal apparatus
- Conjunctiva
- Cornea
- Uveal tract
- Lens
- Optic nerve
- Retina

12. GLAUCOMA

- Early detection
- Types of glaucoma
- Intraocular pressure measurement
- Visual field charting
- Treatment of glaucoma

13. COMMUNITY OPHTHALMOLOGY

- Organization of camps in rural areas
- Early detection of refractive errors and squint in school children

1. EYE BANKING AND REHABILITATION OF BLIND

2. OPERATION THEATRE STERILISATION

- Care of surgical instruments
- Making eye pads ,eye swabs .Eye dressing/banding in Operation theatre

3. BASICS OF SQUINT

- Binocular Single Vision , Phorias , Tropias , refraction in squint
- Amblyopia
- Measurement of squint

4. OCULAR TRAUMA

- Different types of ocular trauma
- Chemical injuries to the eye and its management
- Mechanical injuries to the eye
- Radiation injuries to the eye