Outline of curriculum
of
Diploma in Ophthalmic Assistant Course

First Year

THEROY & DEMONSTRATION (CLASSES 08 AM TO 12 NOON

First Paper: Syllabus Covers-
1. **Only basic idea of human anatomy and physiology** (Cellular System, Skeletal System, Respiratory System, Nervous System, Digestive System, Endocrine System) 2. **Ocular Detail anatomy and physiology** (Lid, Conjunctiva, Cornea , Anterior chamber& angle, aqueous humor, lens, Uvea, Retina, extra ocular muscles ,visual path way , optic nerve)

THEROY & DEMONSTRATION (CLASSES 08 AM TO 12 NOON)

Second Paper: Syllabus Covers-
1. **Optics** (Introduction to light, reflection and refraction, refractive error, optics of refractive error, eye as an ophthalmic instrument, lens and their combinations.) 2. **Medical Record** (Computer application, communicative English, Medical terminology, medical record sciences, coding of disease and procedures, biostatics)

Following subjects will be taught; though there will be internal assessment from these-

1. **Basic of English and communication** (Introduction to grammar, verbs and its application, importance voice- active and passive, importance of communication, Process of communication, factors that influence.

2. **Computer fundamental** (Generation of computer, function of different unit-input units & output units CPU, output and input devices, memories, software, using emails.

PRACTICAL (Classes: 1 PM to 5 PM)

First Year

Practical classes will be after lunch from 01:00 PM to 05:00 PM

Students must present hospital/ ophthalmic lab for practical.

- Hands on training of Vision monitoring.
- Hands on training of assisting in OPD.
- Hands on training of identification of lens and prism.
- Hands on training of computer.
- Hands on training of OPD ophthalmic procedures.

Outline of curriculum
of
Diploma in Ophthalmic Assistant Course

Second Year

THEROY & DEMONSTRATION (CLASSES 08.00 AM TO 12.00PM)

First Paper: Syllabus Covers-
1. **Refraction and basics of dispensing** (Retinoscopy, subjective Refraction, Objective Refraction, Hypermetropia, myopia, Astigmatism, Pseudophakia, Aphakia, Muscle Balance, Anisometropia, Aniseikonia, Accommodation & Covergence, Phoria & Tropia, Amblyopia, Nystagmus. 2. **Fundamental of ophthalmic instruments** (trial set, Retinoscope, Lens meter, Tonometry, Slit Lamp, Perimeter, Keratometer, A-Scan, Synaptophore, Cover Test, Maddox Rod, Maddox Ring.

Second Paper: Syllabus Covers-
1. **Ocular Disease and Pharmacology** (Lid abnormalities, conjunctivitis, pterygium, pinguecula, Cornea ulcer, Corneal Opacity, Cataract, Identification of glaucoma, Uveitis, Vitamin –A deficiency, Extra Ocular Muscles. 2. **Fundamental of Operation Theatre**(Admission Process, Documentation,Prepration of patient, Concept of scrubbing, gowning, glowing surgical equipments identification and care, sterilization , disinfection , emergency drugs, protection of patients surgery.

Following subjects will be taught; though there will be internal assessment from these-

Counseling

- Counsel& Educate patient on Ocular Systematic medication tests and Procedures.
- Educate about modern methods of cataract surgery and its costs
- Respond to and properly document patient phone calls

- Provide patient education on testing procedure and results.
- Challenged-Visually & hearing

Community Ophthalmology

- Functioning of an eye camp
- Guidelines for conducting eye camp
- School screening
- Community based rehabilitation
- Community eye care.
- National eye care Programme & vision 2020.

PRACTICAL (Classes: 1.00 PM to 5.00 PM)

Second Year

Practical classes will be after lunch from 01:00 PM to 05:00 PM

Students must present hospital/ ophthalmic lab for practical.

- Hands on training of subjective refraction.
- Hands on training of assistances in common ocular surgeries.
- Hands on training of retinoscopy.
- Hands on training of syringing.
- Hands on training of sterilization.
- Hands on training of identification of surgical equipments.
- Hands on training of ophthalmic instruments used in OPD.
- Hands on training of counseling.

ELIGIBILITY CRITERIA FOR ADMISSION AND DURATION OF THE COURSE

COURSE DURATION

- It is 2 years, full time diploma course

ELIGIBILITY

- Candidate must have passed 12th with physics chemistry biology or physics chemistry math's
- With 40% marks in intermediate exam

  (from UP Board and other recognized Board)
- Candidate must have completed age of 17 years of age as on 31st December of admission year

SCHEDULE OF EXAMINATION

FIRST YEAR

Paper	Subjects	Marks	Internal Assessment Marks	Total Marks	Pass Marks	Duration of Exam.
First Paper Theory	1. Only basic idea of human anatomy and physiology (Cellular	75	25	100	50	3 Hours

	System, Skeletal System, Respiratory System, Nervous System, Digestive System, Endocrine System) 2. **Detail Ocular anatomy and physiology** (Lid, Conjunctiva, Cornea, Anterior chamber& angle, aqueous humor, lens, Uvea, Retina, extra ocular muscles, visual path way, optic nerve)					
Second Paper Theory	1. **Optics** (Introduction to light, reflection and refraction, refractive error, optics of refractive error, eye as an ophthalmic instrument, lens and their combinations.) 2. **Medical Record** (Computer application, communicative English, Medical terminology, medical record sciences, coding of disease and procedures, biostatics)	**75**	**25**	**100**	**50**	**3 Hours**
Practical	**Oral & Practical**	**75**	**25**	**100**	**50**	**3 Hours**

SCHEDULE OF EXAMINATION

Second Year

Paper	Subjects	Marks	Internal Assessment Marks	Total Marks	Pass Marks	Duration of Exam.
First Paper Theory	1. **Refraction and basics of dispensing**(Retinoscopy, subjective Refraction , Objective Refraction , Hypermetropia, myopia, Astigmatism, Pseudophakia, A phakia, Muscle Balance, Anisometropia, Aniseikonia, Accommodation & Covergence,Phoria & Tropia, Amblyopia, Nystagmus. 2. **Fundamental ophthalmic instrument** of s (trial set, Retinoscope, Lensometer, Tonometry, Slit Lamp, Perimeter, Keratometer, A-Scan	75	25	100	50	3 Hours

	,Synaptophore, Cover Test, Maddox Rod, Maddox Ring.					
Second Paper Theory	1. **Ocular Disease and Pharmacology** (Lid abnormalities, conjunctivitis, pterygium, pinguecula, Cornea ulcer, Corneal Opacity, Cataract, Identification of glaucoma, Uveitis, Vitamin –A deficiency, Extra Ocular Muscles. 2. **Fundamental of Operation** Theatre (Admission Process, Documentation, Preparation of patient, Concept of scrubbing, gowning, glowing surgical equipments identification and care, sterilization , disinfection , emergency drugs, protection of patients surgery.	**75**	**25**	**100**	**50**	**3 Hours**
Practical	**Oral & Practical**	**75**	**25**	**100**	**50**	**3 Hours**

SCHEDULE OF COURSE

(List of holidays, total hours, subject wise allotment of hours)

List of Holidays:

Sunday	-52 days
Summer vacation	-12 days
Gazette Holidays	-23 days
Preparatory Holidays	-12 days
Casual Leave	-14 days
Medical Leave	-07 days
Total Holidays	**-120 days**

Total Hours:

Theory Classes per day -3 Hours

Demonstration and clinical training per day – 5 Hours

Total hours per day - 8 Hours

Total days and Hours in one year -245 days or 1960 Hours

(After deduction of Holidays)

SCHEDULE OF COURSE

Subject wise allotment of hours

FIRST YEAR

Theory & Demonstration (980Hrs) Practical (980Hrs)

First Paper Theory	1. **Only basic idea of human anatomy and physiology** (Cellular System, Skeletal System, Respiratory System, Nervous System, Digestive System, Endocrine System)	250Hrs
	2. **Ocular Detail anatomy and physiology** (Lid, Conjunctiva, Cornea, Anterior chamber& angle, aqueous humor, lens, Uvea, Retina, extra ocular muscles, visual path way, optic nerve)	250Hrs
Second Paper Theory	3. **Optics** (Introduction to light, reflection and refraction, refractive error, optics of refractive error, eye as an ophthalmic instrument, lens and their combinations.) 4. **Medical Record** (Computer application,	200Hrs 90Hrs

	communicative English, Medical terminology, medical record sciences, coding of disease and procedures, biostatics)	
Third Paper Practical	As described in curriculum	980Hrs
Theory Other Subjects (These subjects will be taught &their internal assessment will be done)	5. **Basic of English and communication** (Introduction to grammar, verbs and its application, importance voice- active and passive, importance of communication, Process of communication, factors that influence. 6. **Computer fundamental** (Generation of computer, function of different unit- input units & output units CPU, output and input devices, memories, software, using emails.	60Hrs 130Hrs

SCHEDULE OF COURSE

Subject wise allotment of hours

SECOND YEAR

Theory & Demonstration (980Hrs) Practical (980Hrs)

First Paper Theory	1.Refraction and basics of dispensing (Retinoscopy, subjective Refraction, Objective Refraction, Hypermetropia, myopia, Astigmatism, Pseudophakia, A phakia, Muscle Balance, Anisometropia	250Hrs
	2.Fundamental of ophthalmic instruments (trial set, Retinoscope, Lens meter, Tonometry, Slit Lamp, Perimeter,	250Hrs

	Keratometer, A-Scan, Synaptophore, Cover Test, Maddox Rod, Maddox Ring	
Second Paper Theory	1.Ocular Disease and Pharmacology (Lid abnormalities, conjunctivitis , pterygium , pinguecula, Cornea ulcer, Corneal Opacity , Cataract, Identification of glaucoma , Uveitis , Vitamin A deficiency 2.–Fundamental of Operation Theatre(Admission Process, Documentation, Preparation of patient, Concept of scrubbing, gowning, glowing surgical equipment's identification and care, sterilization , disinfection , emergency drugs, protection of patients surgery Vitamin A deficiency , Extra Ocular Muscles.	200Hrs 120Hrs
Third Paper Practical	As described in curriculum	980Hrs

Theory Other Subjects (These subjects will be taught &their internal assessment will be done)	**Counseling** • Counsel& Educate patient on Ocular Systematic medication tests and Procedures. • Educate about modern methods of cataract surgery and its costs • Respond to and properly document patient phone calls • Provide patient education on testing procedure and results. • Challenged-Visually & hearing **Community Ophthalmology** • Functioning of an eye camp • Guidelines for conducting eye camp • School screening • Community based rehabilitation • Community eye care. • National eye care Program & vision 2020.	60Hrs 100Hrs

	Topics	Hours
	1.Cellular System (Structure of Animal cell, cell organelles& their function)	27 hours

	2.Skeltal System (Name, location &identification of all bones, Joint: types, basic structure & examples)	28 hours
	3.Respiratory System (Respiratory tract: Location, Gross structure, Various parts& their function, Details of breathing mechanism)	28 hours
	4.Nervous System (Gross structure of brain & spinal cord. Functions of different parts of brain & spinal cord Details not required (Gross structure & functions of sensory organs – Eye, Ear, Tongue, Nose	28 hours
	5 Digestive system: Organs of digestive system & Process of digestion	27 hours
	6 Endocrine system: Hormones secreted by Pituitary Thyroid Parathyroid, Pancreas, Adrenal cortex, Adrenal medulla, Gonads, & functions of different hormones.	28 hours
	7. Excretory System: Urinary tract – Gross structure, various parts& their functions, process of urine formation & voiding	28 hours
	8.Reproductive System: Male Reproductive system – Only gross structure& functions Female Reproductive system - Only gross structure& functions	28 hours
	9. Cardiovascular System: Basic Gross structure of heart, vessels opening into heart Leaving the heart. Arterial &Venous tree of body	28 hours

Paper 2. Theory ocular anatomy and physiology (Lid, Conjunctiva, Cornea , Anterior chamber& angle, aqueous	Topics	Hours
	Detailed Structure of orbit &contents of Orbit	20 hours
	Eye ball: Comprehensive anatomy	20 hours

humor, lens, Uvea, Retina, extra ocular muscles ,visual path way , optic nerve)	Extraocular muscle: gross structure, origin, insertion, nerve supply and action	17 hours
	Blood supply to eye & Nerve supply to eye	17 hours
	Gross microscopic anatomy, blood & nerve supply of conjunctiva	17 hours
	Gross microscopic anatomy, blood & nerve supply of Cornea	18 hours
	Gross microscopic anatomy, blood & nerve supply of Sclera	18 hours
	Gross microscopic anatomy, blood & nerve supply of Uvea	18 hours
	Gross microscopic anatomy, blood & nerve supply of Lens	18 hours
	Gross microscopic anatomy, blood & nerve supply of Angle of AC	18 hours
	Physiology of aqueous production and drainage	15 hours
	Gross microscopic anatomy, blood & nerve supply of Vitreous	17 hours
	Gross microscopic anatomy, blood & nerve supply of retina & optic nerve	17 hours
	Gross microscopic anatomy, blood & nerve supply of Visual/pupillary pathway	20 hours

3. Optics (Introduction to light, reflection and refraction, refractive error, optics of refractive error, eye as an ophthalmic instrument	Topics	Hours
	Introduction to Light: Nature of light, Properties of light, Wave optics, Quantum optics	28 hours
	Reflection: Defnition, Law of reflection	28 hours
	Refraction: Defnition, Total internal reflection, Laws of refraction, refraction through various surfaces	28 hours
	Refractive Error: Defnition, types, Optics	28 hours
	Optics of refractive instrument:	28 hours
	Lenses and their combination: Spherical lenses, Astigmatic lenses, Toric lenses, Prism, Magnification of lenses	30 hours
	Transposition: Simple& Toric transposition	30 hours

P2. Medical Record (Computer application, communicative English, Medical terminology, medical record sciences, coding of disease and procedures, biostatics).	Topics	Hours
	Computer Application	15 hours
	Communicative English	15 hours
	Medical Terminology	15 hours

	Medical Record Science	15 hours
	Coding Importance & coding of disease, procedure	15 hours
	Biostatics	15 hours

7. Basic of English and communication (Introduction to grammar, verbs and its application, importance voice- active and passive, importance of communication, Process of communication, factors that influence.	Topics	Hours
	Introduction to grammar	12 hours
	Verbs and its application	12 hours
	Voice- Active & Passive	12 hours
	Importance of communication	12 hours
	Factors that influence communication	12 hours

1. Computer fundamental (Generatio	Topics	Hours
	Generation of Computer	21 hours
	Function of different unit	21 hours
	Input unit, Output unit, CPU, Memory unit	22 hours

n of computer, function of different unit- input units & output units CPU, output and input devices, memories, software, using emails.	Output and Input devices	22 hours
	Software	22 hours
	Using e-mails	22 hours

Curriculum for Practical: -First Year

Diploma in Ophthalmic Assistant

Practical	Topics
	• Hands on training of Vision monitoring.
	• Hands on training of assisting in OPD.
	• Hands on training of identification of lens and prism.
	• Hands on training of computer.
	• Hands on training of OPD ophthalmic procedure.

Details of Curriculum for Second Year Diploma in Ophthalmic Assistant

Paper I Theory. Refraction and basics of dispensing (Retinoscopy, subjective Refraction, Objective Refraction, Hypermetropia, myopia, Astigmatism, Pseudophakia, A phakia, Muscle Balance, Anisometropia r	Topics	Hours
	1. Retinoscopy	20hours
	2. Subjective refraction	20 hours
	3. Objective Refraction	20 hours
	4.Hypemeropia	16 hours
	5 Myopia	16 hours
	6. Astigmatism	16 hours
	7 Pseudophakia	18 hours
	8 A phakia	16 hours
	9Muscle Balance	18 hours
	10. Anisometropia	16 hours
	11. Aniseikonia	16 hours
	12. Amblyopia	20 hours

	13. Nystagmus	18 hours
	14. Phoria &Tropia	20 hours

Paper I- Theory2.Fundamental of ophthalmic instruments (trial set, Retinoscope, Lens meter, Tonometry, Slit Lamp, Perimeter, Keratometry, A-Scan ,Synaptophore, Cover Test, Maddox Rod, Maddox Ring	Topics	Hours
	1. Trial set & its accessories	20 hours
	2. Retinoscope: principle & optics	22 hours
	3. Lens meter: principle & optics	20 hours
	4. Tonometer: types & principle	20 hours
	5. Slit lamp	22 hours
	6. Perimeter: types & method	22 hours
	7. Keratometry: types & method	20 hours
	8. A-Scan : method & principle	20 hours
	9. Synoptophore	22 hours
	10. Cover test	22 hours
	11. Maddox rod	20 hours
	12. Maddox wing	20 hours

Paper 2nd Theory. Ocular Disease and Pharmacology (Lid abnormalities, conjunctivitis, pterygium, pinguecula, Cornea ulcer, Corneal Opacity, Cataract, Identification of glaucoma, Uveitis	Topic	Hours
	Lid Abnormalities	22 hours
	Conjunctivitis, Pterygium, Pinguecula, red eye	22 hours
	Corneal ulcer, opacities	22 hours
	Cataract: types& identification	24 hours
	Identification of Glaucoma	24 hours
	Uveitis	24 hours
	Vitamin A deficiency	20 hours
	Extraocular muscle	22 hours
	Cranial nerve & its supply	20 hours

Paper 2nd Theory Fundamental of Operation Theatre (Admission Process, Documentation, Preparation of patient, Concept of scrubbing, gowning, glowing surgical equipment's identification and care, sterilization, disinfection, emergency drugs, protection of patient's surgery Vitamin A deficiency, Extra Ocular Muscles. 2nd Theory	Topics	Hours
	Admission process	12 hours
	Documentation	12 hours
	Preparation of patient	12 hours
	Concept of scrubbing, gowning& glowing	14 hours
	Surgical equipment identification & care	16 hours
	Sterilization	14 hours
	Disinfection	14 hours
	Emergency drugs	12 hours
	Protection of patient surgery	12 hours

Theory Other Subjects (These subjects will be taught &their internal assessment will be done)	**Topic**	**Hours**
	Counsel& Educate patient on Ocular Systematic medication tests and Procedures.	12 hours
	Educate about modern methods of cataract surgery and its costs	12 hours
	Respond to and properly document patient phone calls	12 hours
Counselling	Provide patient education on testing procedure and results.	12 hours
	Challenged-Visually & hearing	12 hours

Theory Other Subjects (These subjects will be taught &their internal assessment will be done)	**Topic**	**Hours**
Community Ophthalmology	Functioning of an eye camp	16 hours
	Guidelines for conducting eye camp	16 hours
	School screening	16 hours
	Community based rehabilitation	16 hours
	Community eye care.	18 hours
	National eye care Program & vision 2020	18 hours

Curriculum for Practical: -Second Year

Diploma in Ophthalmic Assistant

	Topics
Practical	Hands on training of subjective refraction.
	Hands on training of assistances in common ocular surgeries.
	Hands on training of retinoscopy
	Hands on training of syringing.
	Hands on training of sterilization.

	Hands on training of identification of surgical equipment's.
	Hands on training of ophthalmic instruments used in OPD.
	Hands on training of counseling.