

C-7357

Sub. Code

93311

DIPLOMA EXAMINATION, NOVEMBER 2025.

First Semester

Ophthalmic Technique

OCULAR ANATOMY AND PHYSIOLOGY

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** questions.

1. The layer of the cornea once destroyed does not regenerate is
 - (a) Epithelium
 - (b) Bowman's membrane
 - (c) Descemet's membrane
 - (d) Endothelium

2. The definitive colour of the iris depends upon the
 - (a) stroma
 - (b) anterior limiting layer
 - (c) anterior pigmented layer
 - (d) posterior pigmented layer

3. Diameter of Optic disc is
 - (a) 1.5 mm
 - (b) 4.5 mm
 - (c) 3.5 mm
 - (d) 5.5 mm

4. What is accommodation
- (a) Change in power of the crystalline lens
 - (b) Change in shape of the crystalline lens
 - (c) Convergence and miosis of pupil
 - (d) All of the above
5. Which of the following is true for diurnal variation of IOP?
- (a) IOP is usually higher in the morning hours
 - (b) IOP is usually low in the morning hours
 - (c) In normal eye IOP fluctuation is less than 10 mm Hg
 - (d) None of the above
6. Aqueous humour is secreted by
- (a) angle of anterior chamber
 - (b) choroid
 - (c) ciliary body
 - (d) iris
7. Main component of human lens is
- (a) water
 - (b) protein
 - (c) collagen
 - (d) ascorbic acid
8. The junction of cornea and sclera is known as
- (a) trabecular meshwork
 - (b) limbus
 - (c) ciliary body
 - (d) pupil
9. The weakest bony orbital wall is
- (a) lateral
 - (b) medial
 - (c) floor
 - (d) roof

10. Bruchs membrane is located on
- (a) cornea
 - (b) conjunctiva
 - (c) iris
 - (d) choroid

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write about the measurement of accommodation.

Or

- (b) Write in detail on Stereopsis.

12. (a) Write about the factors governing corneal transparency.

Or

- (b) Write about the action of EOM.

13. (a) Explain about the types of tonometers.

Or

- (b) Write about the nerve supply and blood supply of cornea.

14. (a) Write about the glands of eyelids and conjunctiva.

Or

- (b) Explain the anatomy of crystalline lens.

15. (a) Define scleral spur, scleral sulcus and lamina cribrosa with neat diagram.

Or

- (b) Write about the theories of accommodation.

Part C

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Write in detail on the anatomy of retina with neat diagram.

Or

- (b) Write about the procedure of VEP.

17. (a) Write in detail on the physiology of crystalline lens.

Or

- (b) Write in detail on the tests for colour vision.

18. (a) Write in detail on the anatomy of cornea

Or

- (b) Define accommodation and write about the various tests used to measure accommodation.

19. (a) Write in detail on the angle of anterior chamber and circulation of aqueous humour.

Or

- (b) Write about the physiology of EOM.

20. (a) Write in detail on the anatomy of optic nerve.

Or

- (b) Write in detail on the prerequisites, procedure and recording of ERG.

C-7358

Sub. Code

93312

DIPLOMA EXAMINATION, NOVEMBER 2025

First Semester

Ophthalmic Techniques

**PHYSICAL, GEOMETRICAL OPTICS AND VISUAL
OPTICS**

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** questions.

1. Polarization is not seen with sound, because the sound waves are
 - (a) Longitudinal
 - (b) Transverse
 - (c) Not electromagnetic waves
 - (d) Of long wavelength
2. Which phenomenon establish the particle nature of light
 - (a) interference
 - (b) diffraction
 - (c) polarisation
 - (d) none of these
3. Pinhole improves the visual acuity by
 - (a) coinciding the blur circle on retina
 - (b) placing the circle of least confusion of retina
 - (c) reducing the blur circle
 - (d) all of these

4. If the crystalline lens is dislocated forward it produces
 - (a) Myopia
 - (b) Hypermetropia
 - (c) Presbyopia
 - (d) Astigmatism

5. Pseudomyopia is found in the condition of
 - (a) axial length increase
 - (b) curvature increase
 - (c) refractive error increase
 - (d) spasm of accommodation

6. Against the rule astigmatism means
 - (a) minus cylinder at 90
 - (b) plus cylinder at 90
 - (c) minus cylinder at 180
 - (d) none of them

7. Highly refractive surface of the eye is
 - (a) Lens
 - (b) Cornea
 - (c) Aqueous humour
 - (d) Retina

8. The image formed by prism is
 - (a) Virtual
 - (b) Erect
 - (c) Displaced towards apex
 - (d) All of the above

9. Bifocals are prescribed in
 - (a) myopia
 - (b) Presbyopia
 - (c) astigmatism
 - (d) hypermetropia

10. To observe interference of light two beams of light should be
 - (a) monochromatic
 - (b) of same colour
 - (c) coherent
 - (d) all of these

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write about Newton's ring experiment.

Or

- (b) Write notes on cylindrical lenses.

12. (a) Define facultative and absolute hypermetropia.

Or

- (b) Write about the etiology and clinical features of hyperopia.

13. (a) Write about the procedure of PMT.

Or

- (b) Define interference, diffraction and polarization.

14. (a) Write about the use of lensometer for the measurement of the power of lens

Or

- (b) Write about the dual nature of light.

15. (a) Explain the significance of with and against motions in retinoscopy.

Or

- (b) Write about the procedure of JCC.

Part C

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Write in detail on the production and analysis of plane polarized light.

Or

- (b) Write in detail on deviation, prismatic power and uses of prism.

17. (a) Write about the etiology and clinical features of myopia.

Or

- (b) Write about simple and toric transposition with one example of each.

18. (a) Write about glass prescription with an example also describe the terminologies used

Or

- (b) Write in detail on the classification of electromagnetic spectrum.

19. (a) Write in detail on the procedure of retinoscopy.

Or

- (b) Write in detail on presbyopia.

20. (a) Write about the etiology, clinical features and management of aphakia.

Or

- (b) Write in detail on interference of light.
-

C-7359

Sub. Code

93321

DIPLOMA EXAMINATION, NOVEMBER 2025

Second Semester

Ophthalmic Techniques

MICROBIOLOGY, PATHOLOGY AND PHARMACOLOGY

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** questions.

1. Which of the following refers to the cause of the disease?
(a) Prognosis (b) Etiology
(c) Pathogenesis (d) Complication
2. The following agent does not have the ability to replicate until it infects a cell
(a) Virus (b) Bacteria
(c) Protozoa (d) Fungi
3. Choose an antiviral drug
(a) Moxifloxacin (b) Acyclovir
(c) Cyclopentolate (d) None of the above
4. Steroid induced ocular complication is
(a) CRVO (b) Glaucoma
(c) Papilloedema (d) All of above

5. Near vision is not affected with
- (a) Adrenaline (b) Atropine
(c) Homatropine (d) Pilocarpine
6. Hordeolum internum is a suppurative inflammation of
- (a) glands of zeis (b) glands of moll
(c) meibomian gland (d) all of the above
7. Which of the following is not the causative agent of bacterial conjunctivitis?
- (a) Neisseria gonorrhoea
(b) Herpes simplex
(c) Streptococcus pneumoniae
(d) Staphylococcus aureus
8. The type of cancer that arises in the cells that make the pigment of the skin
- (a) Melanoma (b) Carcinoma
(c) Sarcoma (d) Neoplasm
9. Therapeutic surgical resection of the entire lesion is known as
- (a) Excision biopsy
(b) Incision biopsy
(c) Fine needle aspiration
(d) Biopsy
10. Who is called the father of microbiology
- (a) Alexander Fleming
(b) Joseph Lister
(c) Louis Pasteur
(d) Galileo

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b)

11. (a) Write about the antibiotic sensitivity testing.

Or

- (b) Write about the terms used in pathology.

12. (a) Write about wound healing.

Or

- (b) Write about local anesthetics.

13. (a) Write about drugs affecting pupillary size and light reflexes.

Or

- (b) Write about the preparation of ophthalmic drugs

14. (a) Write about factors affecting pharmacokinetics

Or

- (b) Write about parasitic infections of the eye.

15. (a) Write about the pathology of cataract.

Or

- (b) Write about the sources of drugs.

Part C

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b)

16. (a) Write in detail on sterilization and disinfection.

Or

- (b) Write in detail on tumours of eyelid.

17. (a) Write in detail on ophthalmic antibiotics.

Or

(b) Write about the routes of drug administration.

18. (a) Write about anaesthetics used in ophthalmic procedures.

Or

(b) Write about the pathology of corneal dystrophies

19. (a) Write about pharmacotherapy of ocular viral infections.

Or

(b) Write in detail on the orbital tumours.

20. (a) Write in detail on ocular pharmacokinetics.

Or

(b) Write about antiglaucoma drugs.

C-7360

Sub. Code

93322

DIPLOMA EXAMINATION, NOVEMBER 2025

Second Semester

Ophthalmic Technique

OPTOMETRIC INSTRUMENTS

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** questions.

1. Perimetry is used to assess
 - (a) Binocular vision
 - (b) Visual field
 - (c) Angle of anterior chamber
 - (d) Thickness of cornea

2. Synoptophore is used in assessing the
 - (a) distance vision (b) binocular vision
 - (c) single vision (d) near vision

3. The principle of stenopic slit is based on
 - (a) circle of least confusion
 - (b) conoid of strum
 - (c) Horizontal vs vertical astigmatism
 - (d) Knapp's rule

4. Which one of the following is a corneal topographer?
(a) Orbscan (b) Pentacam
(c) Both (a) and (b) (d) None of the above
5. Which of the following is not an optical component of slit lamp?
(a) field lens (b) astronomical telescope
(c) inverting prism (d) galilean telescope
6. Speed of sound in cornea is
(a) 980 m/s (b) 1640 m/s
(c) 1532 m/ (d) 1540 m/s
7. Which of the following procedure does not need the dilatation of pupil?
(a) Fundus examination
(b) Gonioscopy
(c) Laser interferometry
(d) Retinoscopy
8. Farnsworth munsell 100 hue test is to assess
(a) visual field (b) contrast sensitivity
(c) colour vision (d) both (b) and (c)
9. B scan is used to rule out
(a) retinal detachment
(b) vitreous detachment
(c) axial length
(d) all of these

10. Which one of the following is not a reliability index in a perimetry report?
- (a) False positive (b) fixation losses
(c) false negatives (d) mean deviation

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write about the various types of perimeters.

Or

- (b) Write about the procedure and interpretation of maddox wing.

12. (a) Tabulate the difference between direct and indirect ophthalmoscope.

Or

- (b) Write about the principle and procedure of gonioscope.

13. (a) Write about the different types of pachymeters.

Or

- (b) Write about the procedure of retinoscopy.

14. (a) Write about the instrumentation of A scan.

Or

- (b) Write about lacrimal syringing.

15. (a) Write about the non-invasive tests used for dry eye evaluation.

Or

- (b) Write about the optics of autorefractometer.

Part C

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Write in detail on principle, optics and instrumentation of slit lamp biomicroscope.

Or

- (b) Write in detail on trial set and its components.

17. (a) Write in detail on the instrumentation and optics of retinoscope with neat diagram.

Or

- (b) Write in detail on synoptophore.

18. (a) Write in detail on the principle and optics of indirect ophthalmoscope.

Or

- (b) Write in detail on autorefractometer.

19. (a) Write in detail on the principle, optics and instrumentation of lensometer.

Or

- (b) Write in detail on the principle, procedure and instrumentation of B scan.

20. (a) Write in detail on visual acuity chart construction and procedure.

Or

- (b) Write in detail the instruments used to obtain corneal topography.

C-7361

Sub. Code

93331

DIPLOMA EXAMINATION, NOVEMBER 2025

Third Semester

Ophthalmic Technique

CLINICAL OPHTHALMOLOGY

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** questions.

1. Adhesion between the palpebral and limbal conjunctiva is called
 - (a) Telecanthus
 - (b) Epicanthus
 - (c) Epiblepharon
 - (d) Symblepharon

2. Munson sign is found in
 - (a) Lens
 - (b) Eyelid
 - (c) Retina
 - (d) Optic disc

3. Marcus gunn jaw winking syndrome is associated with
 - (a) Entropion
 - (b) Ectropion
 - (c) Ptosis
 - (d) All of these

4. Koeppe's nodules are situated
 - (a) At the iris crypts
 - (b) At pupillary margin
 - (c) Near collaratte
 - (d) Posterior pigmented layer of iris

5. Salt and pepper appearance of fundus is seen in
 - (a) Congenital syphilis
 - (b) Toxoplasmosis
 - (c) Leprosy
 - (d) Retinitis pigmentosa

6. Flame shaped haemorrhages are seen commonly in the retinopathy of
 - (a) RP
 - (b) Hypertension
 - (c) Diabetes
 - (d) All of the above

7. Hollen horst plaque is a feature of
 - (a) retinal vein occlusion
 - (b) retinal artery occlusion
 - (c) diabetic retinopathy
 - (d) coats disease

8. The most common symptom of patients with retinal detachment is
 - (a) pain
 - (b) flashes and floaters
 - (c) haloes
 - (d) watering

9. In argyl reobertson pupil the accommodative reflex is
 - (a) present
 - (b) absent
 - (c) delayed
 - (d) none of the above

10. Silicone oil is an
- (a) aqueous substitute
 - (b) lens substitute
 - (c) artificial lens
 - (d) vitreous substitute

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write about the congenital anomalies of the Cornea.

Or

- (b) Write about the classification of uveitis.

12. (a) Write about the etiological factors of congenital cataract.

Or

- (b) Write about the clinical features of lattice and snail track retinal degeneration.

13. (a) Write about normal tension glaucoma.

Or

- (b) Write about the types of corneal opacity.

14. (a) Write about any three etiology and clinical features of any three corneal dystrophies.

Or

- (b) Tabulate the differences between chalazion and hordeolum.

15. (a) Write about the clinical features of congenital glaucoma.

Or

- (b) Write about the etiology, signs and symptoms of scleritis.

Part C

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Write in detail on the congenital anomalies of eyelid.

Or

- (b) Write about the definition, etiology, signs and symptoms and management of bacterial conjunctivitis.

17. (a) Write about the pathology and clinical features of developmental cataract.

Or

- (b) Write in detail on primary open angle glaucoma.

18. (a) Write in detail on the genetics and clinical features of retinoblastoma.

Or

- (b) Write about the clinical features, investigations and management of corneal degenerations.

19. (a) Explain the etiology, clinical features, investigations and management ARMD.

Or

- (b) Write in detail on the causes, signs, symptoms and management of bacterial keratitis.

20. (a) Write in detail on keratoplasty.

Or

- (b) Write about the classification, causes, clinical features and management of viral corneal ulcers.

C-7362

Sub. Code

93332

DIPLOMA EXAMINATION, NOVEMBER 2025

Third Semester

Ophthalmic Technique

**OPTOMETRIC OPTICS, CONTACT LENS AND LOW
VISION AIDS**

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** questions.

1. In hard design PAL the corridor is
 - (a) Longer
 - (b) Shorter
 - (c) No corridor
 - (d) None of the above

2. Which type of temple curves around the ear often used in children
 - (a) Library
 - (b) Skull
 - (c) Riding bow
 - (d) Convertible

3. Dk/t denotes
 - (a) Oxygen permeability
 - (b) Equivalent oxygen performance
 - (c) Oxygen transmissibility
 - (d) None of the above

4. The pantoscopic tilt given in PAL is generally
 - (a) 10-12 degrees
 - (b) 20-22 degrees
 - (c) 12-14 degrees
 - (d) 8-10 degrees

5. Choose the optical low vision aid
 - (a) Hand magnifier
 - (b) Notex
 - (c) Typoscope
 - (d) None of the above

6. Functional vision may be improved with which one of the following
 - (a) Refractive correction
 - (b) Low vision aids
 - (c) Instruction in the use of vision
 - (d) All of the above

7. CR-39 plastic lens is prepared from
 - (a) Allyl resin
 - (b) PMMA
 - (c) Both of these
 - (d) None of these

8. ARC consists of extremely thin layer of
 - (a) Calcium fluoride
 - (b) Magnesium fluoride
 - (c) Sodium fluoride
 - (d) None of these

9. Ideal CL property are
 - (a) Oxygen permeability
 - (b) Durability
 - (c) Physiologically inert
 - (d) All of the above

10. Toughest ophthalmic lens for industrial use is
 - (a) CR 39
 - (b) Crown glass
 - (c) Polycarbonate
 - (d) Transition

Part B

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Write about the measurement of IPD.

Or

- (b) Write about the types of non optical low vision aid.

12. (a) Write about the parameters used to select a contact lens.

Or

- (b) Write about the principle and construction of ARC.

13. (a) Write about the composition of contact lens solutions.

Or

- (b) Write about single vision lenses.

14. (a) Write about lens surfacing.

Or

- (b) Write about the contraindications of contact lens.

15. (a) Define low vision and write about its classification.

Or

- (b) Write about the do's and don't's of contact lens wear.

Part C

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Write in detail on bifocal lenses.

Or

(b) Write in detail on pre fitting assessment of contact lens fitting.

17. (a) Write in detail on optical low vision aids.

Or

(b) Write in detail on the characteristics of lens materials.

18. (a) Write in detail on aspheric lenses.

Or

(b) Write in detail on electronic devices used as low vision aid.

19. (a) Write in detail on cosmetic contact lenses.

Or

(b) Write in detail on various spectacle frame materials.

20. (a) Write about absorptive lenses.

Or

(b) Explain on the insertion and removal of contact lenses.