C–5710	Sub. Code
	93321

DIPLOMA EXAMINATION, APRIL 2025

Second Semester

Ophthalmic Techniques

MICROBIOLOGY, PATHOLOGY AND PHARMACOLOGY

(2023 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A $(10 \times 1 = 10)$

Answer **all** questions.

1. When a swab of bacteria is subjected to gram staining, the organism that appear purple or blue under a light microscope are

   (a) Gram negative

   (b) Acid fast bacteria

   (c) Spirochetes

   (d) Gram positive

2. All of the following are pre-cancerous conditions of the lids except

   (a) Naevi

   (b) solar keratosis

   (c) xeroderma pigmentosa

   (d) carcinoma-in-situ

3. Expand TORCH

(a) Toxoplamosis, Rubella, cytomegalo virus and Histoplasmosis

(b) Toxocariosis, Rubella, cytomegalovirus and Herpes simplex

(c) Treponoma, Rubella, Cytomegalo virus, Herpes zooster

(d) None

4. Which of the following drug has more effect on accommodation

(a) Atropine (b) Cyclopentolate

(c) Tropicamide (d) Phenylephrine

5. Intra ocular penetration of topically-instilled drugs is mainly determined by the corneal

(a) Epithelium

(b) Endothelium

(c) Bowman's and descemet's membrane

(d) Stroma

6. Choose an antibacterial drug

(a) Moxifloxacin (b) Acyclovir

(c) Cyclopentolate (d) None of the above

7. Giant papillary conjunctivitis occurs as an allergic response to all except

(a) contact lens (b) prosthesis

(c) intraocular lens (d) nylon sutures

8. Sulphonamide drug is

(a) antifungal (b) antibiotic

(c) antiviral (d) antiallergic

9. Herpes zoster ophthalmicus is caused by

(a) Varicella zoster virus

(b) Staphylococcus

(c) Gonococcus

(d) HSV

10. Microbiology includes the study of which of the following group of organism

(a) algae (b) bacteria

(c) protozoa (d) all of the above

Part B $(5 \times 5 = 25)$

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

11. (a) Write in detail about ocular preparations.

Or

(b) Write notes on sterilization and disinfection.

12. (a) Write about diagnostic drugs used in ophthalmology.

Or

(b) Write about antibiotic sensitivity testing.

13. (a) Write about cell injury.

Or

(b) Write about topical anesthetics.

14. (a) Write about inflammations of eyelid.

Or

(b) Write about cultivation methods.

15. (a) Write about any three viral infections of the eye.

Or

(b) Write about anemia and bleeding disorders.

Part C $(5 \times 8 = 40)$

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

16. (a) Write in detail on route of drug administration.

Or

(b) Write in detail on corneal dystrophies.

17. (a) Write in detail on ocular toxicology.

Or

(b) Write about the genetics and clinical features of retinoblastoma.

18. (a) Write in detail on anti glaucoma drugs.

Or

(b) Write in detail on eyelid tumours.

19. (a) Explain about general anesthetics.

Or

(b) Write in detail on examination of urine and blood smears.

20. (a) Write in detail on Pharmacotherapy of ocular bacterial infection.

Or

(b) Write in detail on ophthalmic antibiotics.

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C–5711

Sub. Code
93322

DIPLOMA EXAMINATION, APRIL 2025

Second Semester

Ophthalmic Techniques

OPTOMETRIC INSTRUMENTS

(2023 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** questions.

1. Stenopic slit is used to assess
   (a) the binocular balancing
   (b) the axis of astigmatism
   (c) the macular function
   (d) the sensitivity of cornea

2. Gonioscopy is used to assess
   (a) angle of anterior chamber
   (b) corneal curvature
   (c) anterior surface of the eye
   (d) none of the above

3. Tonometry helps to determine
   (a) refractive changes (b) Intra Ocular Pressure
   (c) corneal distortion (d) Lens curvature

4. An IDO will project

(a) Virtual image (b) real image

(c) upright image (d) Flat image

5. The extent of peripheral field of vision in normal adult is least on which of the following

(a) nasally

(b) in downward direction

(c) in upward direction

(d) temporally

6. A lensometer measures the

(a) Vertex power of the lens

(b) True power of the lens

(c) Equivalent power of the lens

(d) All of these

7. Keratometry is done using which of the purkinje image

(a) 1st (b) 2nd

(c) 3rd (d) 4th

8. The retinal periphery is visualized by

(a) Indirect ophthalmoscope

(b) Direct ophthalmoscope

(c) Gonioscope

(d) None of the above

9. Which of the following procedure does not need the dilatation of pupil

(a) Fundus examination

(b) Gonioscopy

(c) Laser interferometry

(d) Retinoscopy

10. The thickeness of the cornea is measured by using

(a) schiotz tonometer

(b) keratometer

(c) pachymeter

(d) aesthesiometer

Part B $(5 \times 5 = 25)$

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

11. (a) Write about the principle and optics of keratometer

Or

(b) Tabulate the difference between IDO and DO.

12. (a) Write about the components of trial set.

Or

(b) Write about the uses of corneal topography.

13. (a) Write about the procedure of amsler gird.

Or

(b) Write about the construction of Snellen and Log MAR chart.

14. (a) Write about the principle and optics of autorefractometre.

Or

(b) Write about the types of tonometers.

15. (a) Write about the principle and procedure of Maddox rod.

Or

(b) Write about the filters used in slit lamp and their purposes.

Part C (5 × 8 = 40)

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

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

Or

(b) Write in detail on synoptophore.

17. (a) Write in detail on invasive and non-invasive tests to evaluate dry eye.

Or

(b) Write in detail on the principle, optics, instrumentation and procedure of lensometer.

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

Or

(b) Write in detail on various colour vision devices with instrumentation, procedure and recording.

19. (a) Write in detail on the principle, optics and procedure of A scan.

Or

(b) Write about the procedure and interpretation of cover test.

20. (a) Write about the principle, instrumentation and procedure of automated perimeter.

Or

(b) Write in detail on the principle, optics and procedure of gold mann applanation tonometer.

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C–5712	Sub. Code 93331

DIPLOMA EXAMINATION, APRIL 2025

Third Semester

Ophthalmic Technique

CLINICAL OPHTHALMOLOGY

(2023 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** questions.

1. Inward turning of the lower lid margin is called
   (a) entropion (b) ectropion
   (c) symblepharon (d) trichiasis
2. Iris shadow is seen in
   (a) Immature cataract
   (b) Nuclear type cataract
   (c) Mature cataract
   (d) Hypermature cataract
3. Whitening of eyelashes is known as
   (a) distichiasis (b) Madarosis
   (c) poliosis (d) Trichiasis
4. Koeppe nodules are found in
   (a) Glaucoma
   (b) Trachoma
   (c) Granulomatous uveitis
   (d) Conjunctivitis

5. Herpes zoster ophthalmicus is caused by

(a) Varicella zoster virus

(b) Staphylococcus

(c) Gonococcus

(d) HSV

6. Dyschromatopsia is the term for defective

(a) day vision (b) night vision

(c) colour vision (d) dark adaptation

7. Macular diseases presents with

(a) pain

(b) low peripheral vision

(c) reduced central vision

(d) none of the above

8. The most important finding in proliferative retinopathy is

(a) haemorrahages

(b) neovascularization

(c) hard exudates

(d) cotton wool spots

9. Liquefaction of vitreous gel is

(a) syneresis (b) synchisis

(c) PVD (d) asteroid hyalosis

10. The most common symptom of patients with retinal detachment is

(a) pain (b) flashes and floaters

(c) haloes (d) watering

Part B (5 × 5 = 25)

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

11. (a) Write about the clinical features of dacyrocystitis.

Or

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

12. (a) Write about the opthalmological signs of keratoconus.

Or

(b) Write about central retinal arterial occlusion.

13. (a) Write about the tumours of conjunctiva.

Or

(b) Write about the classification of uveitis based on its etiology.

14. (a) Write about corneal epithelial degenerations.

Or

(b) Write about abnormal pupillary light reflexes.

15. (a) Write about the tumours of eyelids (any three).

Or

(b) Write about retinal vasculitis.

Part C (5 × 8 = 40)

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

16. (a) Explain about the etiology, clinical features and management of bacterial keratitis.

Or

(b) Write about the etiology, clinical features and management of retinal degenerations.

17. (a) Write about the lesions of visual pathway with neat diagram.

Or

(b) Write about the classification and clinical features of developmental cataract.

18. (a) Write about the congenital anomalies of the cornea.

Or

(b) Write about the causes, clinical features and management of fungal keratitis.

19. (a) Write about the etiology, clinical features, investigations and management of retinoblastoma.

Or

(b) Write about the clinical features, investigations and management of primary open angle glaucoma.

20. (a) Write in detail on ARMD.

Or

(b) Write in detail on corneal dystrophies.

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C–5713	Sub. Code 93332

DIPLOMA EXAMINATION, APRIL 2025

Third Semester

Ophthalmic Technique

OPTOMETRIC OPTICS, CONTACT LENS AND LOW VISION AIDS

(2023 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A $(10 \times 1 = 10)$

Answer **all** questions.

1. When a hyperope transfers from spectacles to contact lenses, they will use

   (a) Less convergence and less accommodation

   (b) More convergence and less accommodation

   (c) More convergence and more accommodation

   (d) Less convergence and more accommodation

2. Which one is the contraindication for soft CL

   (a) Antihistamine use

   (b) Irregular astigmatism

   (c) Autoimmune disease

   (d) All of the above

3. Which type of filter is used to observe the RGP fitting

(a) Yellow filter (b) Red free filter

(c) Cobalt blue (d) All of the above

4. Dk/t denotes

(a) Oxygen permeability

(b) Equivalent oxygen performance

(c) Oxygen transmissibility

(d) None of the above

5. Which type of visual acuity chart is used when assessing visual acuity in low vision patients

(a) Snellen chart (b) Log MAR chart

(c) Tumbling E chart (d) Pelli Robson chart

6. Which one of the following is not the core function of therapeutic CL

(a) Pain relief

(b) Correction of refractive error

(c) Mechanical protection

(d) Maintenance of corneal epithelial hydration

7. The abbe number of an ophthalmic lens material is an expression of the material's

(a) relative index (b) relative dispersion

(c) refractive index (d) refractive dispersion

8. The focal power of a lens with a focal length of 50 cm is

(a) +2.5 D (b) +2.0 D

(c) +1.00 D (d) +1.50 D

9. An increase in axial length of the eye will cause

(a) myopia (b) hyperopia

(c) presbyopia (d) both (a) and (b)

10. Which lens material is preferred for dispensing in pediatric population

(a) Trivex (b) Polycarbonate

(c) Glass (d) CR 39

Part B $(5 \times 5 = 25)$

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

11. (a) Write about bifocal lenses.

Or

(b) Tabulate the classification of low vision.

12. (a) Write about the indications of contact lens fitting.

Or

(b) Write about aspheric lenses.

13. (a) Write about toric contact lenses.

Or

(b) Write about the types of magnification.

14. (a) Write about ARC.

Or

(b) Write about the parameter selection in contact lens fitting.

15. (a) Write about inspection of lens quality.

Or

(b) Write about datum and boxing system.

Part C (5 × 8 = 40)

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

16. (a) Explain in detail on non-optical aids used in low vision.

Or

(b) Explain in detail on the pre- fitting assessment of contact lens.

17. (a) Explain about the glass, plastic and polycarbonate lens materials.

Or

(b) Write about electronic aids in low vision.

18. (a) Write in detail on insertion and removal of contact lens.

Or

(b) Write about progressive addition lenses.

19. (a) Write about therapeutic contact lenses.

Or

(b) Write about the characteristics of lens material.

20. (a) Write about the different types of optical aids in low vision.

Or

(b) Write in detail on ophthalmic lens coating.

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