C–8364	Sub. Code 93311

DIPLOMA EXAMINATION, APRIL 2026.

First Semester

Ophthalmic Techniques

OCULAR ANATOMY AND PHYSIOLOGY

(2023 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** questions.

1. Posterior segment of the eyeball includes structures present posterior to the
   (a) Posterior surface of the lens and zonules
   (b) iris and pupil
   (c) Vitreous body
   (d) Anterior surface of lens and zonules

2. Which one is a sweat gland
   (a) Gland of moll
   (b) Gland of zeis
   (c) meibomian gland
   (d) All of the above

3. Layer of the non pigmented epithelum of ciliary body is the forward continuation of
   (a) Sensory retina
   (b) Internal limiting lay
   (c) Bruchs membrane
   (d) none of the above

4. Neurons of first order for visual sensations are

(a) Rods and cones

(b) Bipolar cells

(c) Ganglion cells

(d) None of the above

5. Diameter of the optic disc is

(a) 1.5 mm (b) 2.5 mm

(c) 3.5 mm (d) 5 mm

6. What is accomodation

(a) Change in power of the crystalline lens

(b) Change in shape the crystalline lens

(c) convergence and miosis of pupil

(d) all of the above

7. Composition of aqueous humour is similar to plasma except that it has

(a) High concentration of bicarbonate

(b) Low concentration of bicarbonate

(c) High concentration of glucose

(d) Low concentration of pyruvate

8. 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

9. Which one of the following is not the grade of binocular vision

(a) SMP (b) Fusion

(c) ARC (d) Steropsis

10. VEP stands for
    (a) Visually evoked potential
    (b) Visually enlarged potential
    (c) Variably evoked potential
    (d) None of the above

Part B (5 × 5 = 25)

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

11. (a) Write in detail on the action of extra ocular muscles.

Or

(b) Write in detail on changes in crystalline lens during accommodation.

12. (a) Define accommodation and write about various test used to assess accommodation.

Or

(b) Write about the angle of anterior chamber.

13. (a) Write about the theories of binocular vision.

Or

(b) Write about the arrangement of retinal nerve fibers.

14. (a) Explain the nerve supply of eyelids and also list the layers of eyelids.

Or

(b) Write about the measurement of intraocular pressure.

15. (a) Write in detail on the photoreceptors.

Or

(b) Write in detail on tear film.

Part C

(5 × 8 = 40)

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

16. (a) Write in detail on the physiological factors governing corneal transparent.

Or

(b) Write about the anatomy of extraocular muscles.

17. (a) Explain in detail on lacrimal system with neat diagram.

Or

(b) Explain about the prerequisites, procedure and recording of visual acuity.

18. (a) Write about the various methods to assess colour vision.

Or

(b) Write in detail on the grades of binocular single vision.

19. (a) Write in detail on the anatomy of cornea with neat diagram.

Or

(b) Write in detail on the anatomy of visual pathway with neat diagram.

20. (a) Explain in detail on the aqueous drainage.

Or

(b) Explain in detail on the procedure of ERG.

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C–8366	Sub. Code 93321

DIPLOMA EXAMINATION, APRIL 2026.

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. The following agent does note have the ability to replicate until it infects a cell

   (a) Virus (b) Bacteria

   (c) Protozoa (d) Fungi

2. Pharmacokinetics includes study of all except

   (a) Absorption (b) Distribution

   (c) adverse effects (d) Excretion

3. Hyper osmotic agents will

   (a) Raise IOP (b) Lower IOP

   (c) No effect in IOP (d) None

4. The study of fungi and their unique relationships with other organisms and the environment is

   (a) Bacteriology (b) Mycology

   (c) Parasitology (d) None of the above

5. What are the causative organisms of Leprosy
   (a) M.Tuberculae (b) M. leprae
   (c) Rubella (d) Adeno virus

6. The rate of drug absorption is high in
   (a) small intestine (b) large intestine
   (c) stomach (d) all of the above

7. Which of the following drug has the least effect on accommodation
   (a) Atropine (b) Cyclopentolate
   (c) Tropicamide (d) Phenylephrine

8. Expand TORCH
   (a) Toxoplasmosis, Rubella, cytomegalo virus, Histoplasmosis
   (b) Toxocariosis, Rubella, cytomegalovirus and Herpes simplex
   (c) Treponoma, Rubella, Cytomegalo virus, Herpes zoster
   d) none of the above

9. Gram staining is a
   (a) Simple staining
   (b) Acid fast staining
   (c) Differential staining
   (d) Negative staining

10. 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

Part B (5 × 5 = 25)

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

11. (a) Write about drug excretion and toxicity.

Or

(b) Write about preparation and packaging of ophthalmic drugs.

12. (a) Write about ocular lesions of common fungi.

Or

(b) Write about nature and sourced of drugs.

13. (a) Write notes on examination of blood smears.

Or

(b) Write about ocular toxicology.

14. (a) Write about the ocular manifestations of tuberculosis.

Or

(b) Write notes on drugs affecting accommodation and pupillary size and light reflex.

15. (a) Write notes on pharmacodynamics.

Or

(b) Write notes on Anemia and its clinical features.

Part C (5 × 8 = 40)

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

16. (a) Write about anesthetics used in ophthalmic procedure in detail.

Or

(b) Write in detail on the pathology and types of cataract.

17. (a) Write in detail on routes of drug administration.

Or

(b) Write in detail on sterilization and disinfection.

18. (a) Write in detail on the pharmacotherapy of ocular viral infections.

Or

(b) Write in detail on retinoblastoma.

19. (a) Write in detail on ophthalmic diagnostic drugs.

Or

(b) Explain about any 3 ocular bacterial infections with the clinical features and management

20. (a) Write in detail on the clinical features, types and management of leprosy.

Or

(b) Write in detail on antiglaucoma drugs.

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C–8367

Sub. Code
93322

DIPLOMA EXAMINATION, APRIL 2026

Second Semester

Ophthalmic Techniques

OPTOMETRIC INSTRUMENTS

(2023 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 1 = 10)

Answer **all** questions.

1. Schirmer's test is used to diagnose

   (a) Dry eye (b) Keratitis

   (c) Honer's syndrome (d) None of the above

2. Stenopic slit is used to assess

   (a) The binocular balancing

   (b) The axis of astigmatism

   (c) The macular function

   (d) The sensitivity of cornea

3. Gonioscopy is used to assess

   (a) Angle of anterior chamber

   (b) Corneal curvature

   (c) Anterior surface of the eye

   (d) None of the above

4. 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

5. Which of the following is not a colour vision testing device

(a) Ishihara test plates

(b) D 15

(c) FM100

(d) Vistech chart

6. 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

7. The retinal periphery is visualized by

(a) Indirect ophthalmoscope

(b) Direct ophthalmoscope

(c) Gonioscope

(d) None of the above

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

(a) Fundus examination

(b) Gonioscopy

(c) Laser interferometry

(d) Retinoscopy

9. Principle of duochrome is

(a) spherical aberration

(b) chromatic aberration

(c) coma

(d) astigmatism

10. Keratometry is done using which of the purkinje image

(a) 1^{st} (b) 2^{nd}

(c) 3^{rd} (d) 4^{th}

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

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

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

Or

(b) Write about lacrimal syringing.

12. (a) Write about the principle and applications of slit lamp biomicroscope.

Or

(b) Write about TBUT.

13. (a) Write about the types of tonometer.

Or

(b) Write about colour vision test

14. (a) Write about the construction of Snellen chart.

Or

(b) Write about the various types of pachymeters.

15. (a) Write about Maddox rod.

Or

(b) Tabulate the difference between IDO and DO.

Part C (5 × 8 = 40)

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

16. (a) Write in detail on the components of trial set.

Or

(b) Write in detail on the instrumentation, principle and applications of spot and streak retinoscopes also explain the advantages of streak retinoscope over spot retinoscope.

17. (a) Write about the significance of with and against motion in retinoscopy.

Or

(b) Write in detail on dry eye evaluation.

18. (a) Write in detail on the principle and instrumentation of direct ophthalmoscopy.

Or

(b) Write in detail on the automated lensometer.

19. (a) Write in detail on the principle and instrumentation of B scan.

Or

(b) Write in detail on RAF ruler and prism bar.

20. (a) Write about synoptophore.

Or

(b) Write in detail on visual acuity assessment.

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