

CP-8569

Sub. Code

22

B.Sc. DEGREE EXAMINATION, APRIL 2018

Second Semester

Optometry

OCULAR ANATOMY

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Name the parts of II cranial Nerve.
2. Foveal Avascular Zone.
3. Name the layers of Choroid.
4. Name the connective tissue system of the orbit.
5. What is Geniculo calcarine pathway?
6. Name the cells in Inner Nuclear Layer of retina.
7. Write notes on stratum Opticum.
8. Draw the nerve arrangement in proximal and distal portion of Optic Nerve.
9. Write the biomicroscopic stratification of crystalline lens.
10. Write the refractive indices of cornea, lens, aqueous, vitreous.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Blood supply of Uvea.

Or)

(b) Structure visible in angle and explain Shaffer's grading.

12. (a) Anatomy of Cornea.

Or

(b) Anatomy of Conjunctiva.

13. (a) Anatomy of Ciliary Body.

Or

(b) Anatomy of Vitreous.

14. (a) Write the surgical spaces of the orbit.

Or

(b) Anatomy of Sclera.

15. (a) Macroscopic structure of Iris.

Or

(b) Write about the contents of the orbit.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Anatomy of Crystalline Lens.

Or

(b) Anatomy of Retina.

17. (a) Anatomy of VI cranial nerve.

Or

(b) Walls of the orbit.

18. (a) Anatomy of visual pathway.

Or

(b) Anatomy of Extra Ocular muscles.

CP-8570

Sub. Code

23

B.Sc. DEGREE EXAMINATION, APRIL 2018

Second Semester

Optometry

OCULAR PHYSIOLOGY

(2016 onwards)

Time : 3 Hours

Maximum : 70 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. List out the layers of retina.
2. Explain endothelium pump mechanism.
3. Briefly describe aqueous secretion and excretion pathway.
4. What is tear film break up time?
5. What is pursuit eye movement?
6. What are vergence movements?
7. What is Hippius?
8. What is range of accommodation?
9. What is amplitude of accommodation?
10. What is horoptor?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Explain the factors responsible for corneal transparency.

Or

- (b) Explain the conventional pathway and uveo — scleral aqueous drainage pathway.

12. (a) Explain blood retinal barrier.

Or

- (b) Explain blood aqueous barrier.

13. (a) Explain basic kinematics and Physiology of right superior rectus muscle.

Or

- (b) Explain Arc of contact, Muscle plane, and axis of rotation.

14. (a) Explain different types of pupillary reflexes.

Or

- (b) What is presbyopia? Explain types and signs of presbyopia.

15. (a) Explain the components of visual acuity.

Or

- (b) Explain light and dark adaptation.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain different types of pupillary defects.

Or

- (b) Tabulate origin, action, blood supply, nerve supply and course of insertion of EOM.

17. (a) Explain grades of BSV.

Or

- (b) What is accommodation? Explain the mechanism, changes taking place during accommodation.

18. (a) Explain Electro diagnostic tests.

Or

- (b) Explain color vision.
-

CP-8571

Sub. Code

24

B.Sc. DEGREE EXAMINATION, APRIL 2018.

Second Semester

Optometry

PHYSICAL OPTICS

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is the visible region?
2. State the first law of reflection.
3. What are the coherent sources?
4. State principle of superposition.
5. Define resolving power of microscope.
6. What is analyzer?
7. What are retarders?
8. What is unpolarized light?
9. What is population inversion?
10. Give the wavelength range of electromagnetic spectrum.

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) Write the short notes on dual nature of light.

Or

- (b) What is a simple harmonic motion? Obtain the mathematical representation of a simple harmonic wave.

12. (a) Differentiate between interference and diffraction of light.

Or

- (b) Give a brief account of colours of thin film.

13. (a) Write a short notes on : Resolving power and magnifying power of a microscope.

Or

- (b) State and explain Rayleigh's criterion for spectral resolution.

14. (a) What are polarizers and analysers?

Or

- (b) Compare a zone plate with a convex lens.

15. (a) What is the role of He in He-Ne laser?

Or

- (b) Write a note on ultra violet spectrum.

Part C $(3 \times 10 = 30)$ Answer **all** questions.

16. (a) Discuss the working principle of Michelson's method to determine the velocity of light.

Or

- (b) Give the theory of diffraction due to single slit.

17. (a) Discuss the superposition of two simple harmonic waves at right angles to each other.

Or

- (b) Describe Lloyd's mirror experiment to determine the wavelength of light.

18. (a) Discuss the working, construction and applications of telescope.

Or

- (b) State the fundamental conditions for the production of interference fringes.

CP-8572

Sub. Code

25

B.Sc. DEGREE EXAMINATION, APRIL 2018

Second Semester

Optometry

MICROBIOLOGY AND PATHOLOGY

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What are the uses of giemsa staining?
2. What is bacteriology?
3. What is anaphylaxis?
4. What is healing mechanism?
5. Define sensitivity?
6. What is the use of disinfection agent?
7. Name any two virus that cause ocular lesions
8. What is a pseudo tumor?
9. What is a melanoma
10. Name the causative organism of syphilis and leprosy.

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write a short note on the pathology of a cataract and its types.

Or

- (b) Write short notes on structure and functions of immunoglobulins.

12. (a) Brief about inflammation pathway.

Or

- (b) Give an account of mucor and candida species.

13. (a) Write a short note on normal ocular flora.

Or

- (b) Differentiate between sterilization and disinfectants.

14. (a) Write a short note on lens induced glaucoma.

Or

- (b) Write a short note on gram's staining.

15. (a) Write a short note on fixing of slides.

Or

- (b) Brief about the disease manifestations and treatment of Acanthameoba species.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Write a detail note on healing and repair mechanism.

Or

- (b) Brief about Retinoblastoma and lacrimal gland tumors disease manifestations and treatment.

17. (a) Define Hypersensitivity and types of reaction.

Or

- (b) Write a detail note on culture and its types.

18. (a) Brief about any two specimen collection techniques used in the lab.

Or

- (b) Write a short note on the clinical importance, ocular lesions diagnosis and treatment of gram positive bacilli.

CP-8573

Sub. Code

41

B.Sc. (Optometry) DEGREE EXAMINATION, APRIL 2018

Fourth Semester

EMPLOYABILITY SKILLS

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What are the kinds of interview?
2. Write some interview techniques.
3. What are the types of letter writing?
4. Give some examples for formal letter and informal letter writing.
5. What is the use of telegram?
6. How to write –email?
7. What are the different types of greetings?
8. Give expansion of an outline.
9. Name the types of composition.
10. How to develop creative competency?

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) Write a brief note on telephone etiquettes.

Or

- (b) Explain the kinds of interview.

12. (a) Write a brief note on letter writing.

Or

- (b) How to fill a job application? Explain.

13. (a) Write a brief note on note-making.

Or

- (b) Explain the importance of note-taking.

14. (a) Write short notes on the types of composition.

Or

- (b) Distinguish between free composition and guided composition.

15. (a) Explain Non-verbal communication with proper examples.

Or

- (b) What are the uses of audio-video aids in communication?

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the techniques of resume writing in detail.

Or

- (b) Write an essay on interview skills.

17. (a) Write an essay on reading comprehension.

Or

- (b) Elaborate on the procedures of writing a book review.

18. (a) Write an essay on the uses of audio-visual aids in communication.

Or

- (b) Write an essay on time management.

CP-8574

Sub. Code

42

B.Sc. DEGREE EXAMINATION, APRIL 2018

Fourth Semester

Optometry

OPTOMETRIC OPTICS

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Snell's law.
2. Define light.
3. Describe the wave nature of light.
4. Define apical angle.
5. What is a best form spherical lens?
6. Sag formula.
7. Explain absorption.
8. Mention two plastic lens materials with their refractive indices.
9. What is Glazing?
10. What is rotation test?

Part B**(5 × 5 = 25)**Answer **all** questions.

11. (a) List the properties of light.

Or

- (b) Give notes on electromagnetic spectrum.

12. (a) Fresnel's prisms.

Or

- (b) Rotary prisms.

13. (a) Properties of lens materials.

Or

- (b) High index lenses.

14. (a) Explain what is meant by jump in trifocal lenses. What are the two noticeable effects of jump to the wearer?

Or

- (b) Define with diagrams :

- (i) Segment height
- (ii) Segment depth
- (iii) Segment drop.

15. (a) Toughened lens.

Or

- (b) Discuss the advantages of polarising filters.

Part C $(3 \times 10 = 30)$ Answer **all** questions.

16. (a) Transpose cross-cyl to spherocyl lenses.

(i) +2.00 DCX H / +4.00 DCX V

(ii) -4.00 DCX V / -6.50 DCX H

(iii) -0.50 DCX H / +0.50 DCX V

(iv) +1.50 DCX V / +2.25 DCX H

Or

(b) Give detailed account on lenticular lenses.

17. (a) Give an account on refraction through prisms.

Or

(b) Discuss in detail about aberrations in ophthalmic lenses.

18. (a) Faults in the material of the lens.

Or

(b) Explain in detail the process of surfacing.

CP-8575

Sub. Code

43

B.Sc. DEGREE EXAMINATION, APRIL 2018

Fourth Semester

Optometry

OCULAR DISEASE — II

(2016 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Cherry Red Spot.
2. Cryotherapy.
3. List any two ocular emergencies.
4. Amaurosis fugax.
5. RAPD.
6. Oscillopsia.
7. Tests for malingering.
8. True or False :
 - (a) Congenital lesions could cause 4th nerve palsy.
 - (b) Traumatic brain injury could result in fourth nerve palsy.

- 9. Ice test.
- 10. 'a-wave' in ERG.

Part B

(5 × 5 = 25)

Answer **all** questions.

- 11. (a) Rhegmatogenous RD.
Or
(b) Exudative RD.
- 12. (a) As an optometrist, how would you screen for diabetic retinopathy?
Or
(b) List the sings of hypertensive Retinopathy.
- 13. (a) Write short notes on non ischemic CRVO.
Or
(b) Write short notes on ischemic CRVO.
- 14. (a) Park's three step test.
Or
(b) Amblyopia - types and clinical management.
- 15. (a) Kier syndrome.
Or
(b) Leber Hereditary optic neuropathy.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Causes of Retinal Artery occlusions.

Or

(b) Ocular Ischemic syndrome.

17. (a) Proliferative DR.

Or

(b) Clinically significant macular edema and treatment of DR.

18. (a) Types of Nystagmus.

Or

(b) Third nerve palsy.

CP-8576

Sub. Code

44

B.Sc. DEGREE EXAMINATION, APRIL 2018

Fourth Semester

Optometry

OPTOMETRIC INSTRUMENTATIONS — II

(2006 onwards)

Time : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Minimum resolvable acuity.
2. Visual cycle.
3. Color confusion theory.
4. Hyper acuity.
5. False positives in HFA.
6. Dueteranomaly.
7. Absolute Scotoma.
8. What is a time domain OCT?
9. Mention the parameters of a scan.
10. Geneva lens measure.

Part B**(5 × 5 = 25)**Answer **all** questions

11. (a) Explain about kinetic perimetry.

Or

(b) Discuss about the different patterns of field loss found in perimetry.

12. (a) Berman's locator. What are the other alternatives for it?

Or

(b) Diathermy and its types.

13. (a) Different staining techniques used in lacrimal assessment.

Or

(b) Indications of ocular cryotherapy.

14. (a) Photorefraction.

Or

(b) Principles of operation of retinoscope.

15. (a) Advantages of Direct gonioscopy.

Or

(b) Limitations of fluorescein angiography.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Give a detailed account on Amsler grid.

Or

(b) Give a detailed account on FFA.

17. (a) Give a detailed account on gonioscopic view of Angle structures.

Or

(b) Ultrasound Biomicroscope.

18. (a) Give an account on Ascan.

Or

(b) Applanation Tonometry.

CP-8577

Sub. Code

61

B.Sc. DEGREE EXAMINATION, APRIL 2018

Sixth Semester

Optometry

CONTACT LENSES — II

(Upto 2015 batch)

Time : 3 Hours

Maximum : 70 Marks

Part A

(5 × 6 = 30)

Answer any **five** questions.

1. (a) Prism ballast
(b) Slab off.
2. Disposable contact lenses.
3. Piggy back lenses.
4. Dk/t – Explain.
5. Prosthetic Eye Fitting.
6. LARS – Explain.
7. Recent advances in Contact Lenses.
8. Rose k Lenses.

Part B

(4 × 10 = 40)

Answer any **four** questions.

9. Bifocal and Multifocal Contact lenses.
 10. Extended Wear lens.
 11. Advantages of RGP lenses.
 12. Removal technique in RGG and Soft lens.
 13. CL Solutions.
 14. Common Complications in CL Usage.
 15. Indications for therapeutic lenses.
-

CP-8578

Sub. Code

62

B.Sc. DEGREE EXAMINATION, APRIL 2018

Sixth Semester

Optometry

BINOCULAR VISION – II

(Upto 2015 batch)

Time : 3 Hours

Maximum : 70 Marks

Part A

(5 × 6 = 30)

Answer any **five** questions.

1. Krimsky test
2. Types of suppression
3. Different tests of diagnose ARC
4. Hess screen charting
5. (a) Prism bar
(b) Risley prism.
6. Diplopia charting
7. Types of ARC
8. Sensory to Motor fusion

Part B

(4 × 10 = 40)

Answer any **four** questions.

9. Cover Tests
 10. Maddox Red Tests
 11. Amblyopia
 12. Synoptophore tests
 13. Convergence Insufficiency
 14. Park's three step test
 15. Use of prisms in BV clinic.
-

CP-8579

Sub. Code

63

B.Sc. DEGREE EXAMINATION, APRIL 2018

Sixth Semester

Optometry

LOW VISION AIDS

(Upto 2015 batch)

Time : 3 Hours

Maximum : 70 Marks

Part A

(5 × 6 = 30)

Answer any **five** questions.

1. Legal blindness
2. Contrast sensitivity
3. Log Mar Charts
4. Hirschberg Test
5. Hand Magnifiers
6. Prism types used in LVA clinic
7. Kastenbaum formula
8. Galilean and keplarian telescopes

Part B

(4 × 10 = 40)

Answer any **four** questions.

9. Types of Telescopes
 10. Types of magnifications
 11. Refraction techniques in LV clinic
 12. Stand Magnifiers
 13. Spectacle Magnifiers
 14. Amsler charts
 15. LVA in Retinitis pigmentose.
-

CP-8580

Sub. Code

64

B.Sc. DEGREE EXAMINATION, APRIL 2018

Sixth Semester

Optometry

SYSTEMIC DISEASES AFFECTING THE EYE

(Upto 2015)

Time : 3 Hours

Maximum : 70 Marks

Part A

(5 × 6 = 30)

Answer any **five** questions.

1. Write notes on arthritis.
2. Write about classification of Hypertension and its treatment.
3. Write about the ocular manifestations of Vitamin A deficiency.
4. Write notes on syphilis and its ocular manifestations.
5. Write in detail about malaria.
6. Explain Sub Acute Bacterial Endocarditis.
7. Explain in detail about Papilloedema.
8. Write notes on retinoblastoma.

Part B

(4 × 10 = 40)

Answer any **four** questions.

9. Explain about Diabetic Retinopathy and its treatment.
 10. Write about Tuberculosis, its investigation, ocular manifestations and treatment.
 11. Classification of Neoplasm.
 12. Write in detail about Retinal Arterial Occlusions.
 13. Draw and explain the visual pathway lesions.
 14. Write about Thyroid Eye Disease.
 15. Explain about Hypertensive Retinopathy.
-