

BLDE (DEEMED TO BE UNIVERSITY)

July-2022

B.Sc. in Optometry

[Time: 3 Hours]

[Max. Marks: 80]

**III SEMESTER
PAPER - I (Physical Optics)
QP CODE: 8340**

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Explain the application of Laser's in ophthalmology and medicine.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Properties of light
3. Michelson interferometer
4. Einstein's A and B coefficient
5. Chromatic Aberrations
6. Interference in thin film
7. Ultra violet spectrum
8. Elliptically and circularly polarized light
9. Application of Polarization
10. What is Weber's law

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Uses of Argon laser
12. Properties of ultraviolet spectrum
13. Raman effect
14. Define dispersion of light
15. Laser Pumping
16. Visual acuity
17. Principles of laser
18. Write a note on polarization of light
19. Total internal reflection
20. Applications of photoelectricity
21. Infra -red spectrum

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III SEMESTER

PAPER - II (Geometrical Optics)

QP CODE: 8341

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Describe the errors of refraction.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Vergence.
3. Huygens wave theory.
4. Wedge shaped thin films.
5. Elliptically and circularly polarized light.
6. Raman Effect.
7. Chromatic aberrations
8. Resolving power of optical instruments.
9. Aphakia.
10. Zone Plate.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Double refraction.
12. Power of a lens
13. Biquartz.
14. Prentice Rule. → *Infrared Spectrum.*
15. Define vergence of light. What are the types of vergence?
16. Angular Magnification.
17. Back vertex power.
18. Definition of lens as combination of two surfaces.
19. Snell's Law.
20. Definition of crown and flint glasses.
21. Define dispersion of light.

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**III SEMESTER
PAPER - III (Visual Optics)
QP CODE: 8342**

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Write in details about optics, types clinical features and management of Myopia.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Presbyopia
3. Snellen's Chart
4. Pinhole test
5. Uses of prism in ophthalmology
6. Types of hypermetropia
7. Aphakia
8. Cardinal data of a spectacle lens
9. Types and management of astigmatism
10. Anomalies of accommodation

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Jackson cross cylinder
12. Identification of cylinder lens
13. Define Anisometropia
14. Pseudoaphakia
15. Visual angle
16. Near Vision Chart.
17. Vertex distance
18. RAF Ruler
19. Angle Kappa
20. Correction of Presbyopia
21. Visual acuity in children

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III SEMESTER

PAPER - IV (Ocular Disease I)

QP CODE: 8343

Your answer should be specific to the questions asked.
Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Write about the clinical features and management of Keratoconus.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Orbital cellulitis.
3. Blepharitis.
4. Viral keratitis.
5. Panophthalmitis.
6. Episcleritis.
7. Ptosis.
8. Chalazion.
9. Vernal conjunctivitis.
10. Pars Planitis.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Conjunctival Concretion.
12. Pannus.
13. Name three layers of tear film.
14. Descematocele
15. Tear film break up Time.
16. Keratic precipitates
17. Trichiasis
18. Lagophthalmos.
19. Hordeolum Externum.
20. Corneal edema.
21. Hypopyon.

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III SEMESTER

PAPER - V (Clinical Examination & Visual System)

QP CODE: 8344

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Enumerate different types of tonometers. Describe the techniques, advantages and disadvantages of any one method.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Duochrome test.
3. Cross cylinder.
4. Schirmers test and interpretation.
5. Photostress test.
6. Difference between direct and indirect ophthalmoscopy.
7. Cover / uncover test, alternate cover tests and their interpretation.
8. Maddox rod and its clinical applications.
9. Confrontation test, procedure, indications and uses.
10. Colour vision, name the theories and methods of examination of colour vision.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Cardinal positions of eye.
12. Amsler grid test.
13. Lid eversion.
14. Digital tonometry.
15. Near vision.
16. Tear film break up Time.
17. Name three charts used for distant vision.
18. Steropsis.
19. Pupil examination.
20. Prism bar.
21. Bjerrum's screen.