

BSe, OPT. March-2025

**BLDE (DEEMED TO BE UNIVERSITY)**

**B.Sc. in Optometry**

[Time: 3 Hours]

[Max. Marks: 80]

**IV SEMESTER**

**PAPER – I (Optometric Optics I&II)**

**QP CODE: 8440**

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

**Long Questions**

**10X1 = 10 Marks**

1. Explain about Progressive Addition lens

**Short Essays: (Any – 8)**

**5 X 8 = 40 Marks**

2. Briefly explain about the Refraction, Reflection, Absorption
3. Explain about different types of aberrations of Ophthalmic lens
4. Simple transpose the following:
  - a) +3.50 Dsph/-2.50 Dcyl \* 1800
  - b) -7.00 Dsph/+1.75 Dcyl \* 350
  - c) +3.50 Dcyl \* 1750
5. Explain about fresnel prisms and its uses
6. Explain about Polaroids lens
7. Explain about the types of Tints and its uses
8. Explain about Prentice's rule
9. Explain about the Anti- Reflective coating
10. Explain about the sagittal depth and its derivation.

**Short Answers: (Any – 10)**

**3 X 10 = 30 Marks**

11. What is vertex distance?
12. Explain about refraction
13. What is convex lens
14. Explain about absorption
15. What are the properties of Concave lens?
16. What is toric lens?
17. Define prism diopter
18. What is lens surfacing?
19. What is aspheric lens?
20. What are the indications of PAL
21. What is boxing system?

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## **B.Sc. in Optometry**

[Time: 3 Hours]

[Max. Marks: 80]

### **IV SEMESTER**

#### **PAPER – II (Ocular Diseases II & Glaucoma)**

**QP CODE: 8441**

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

#### **Long Questions**

**10X1 = 10 Marks**

1. Describe anatomy and physiology of lens. Classify cataract and explain pathogenesis, examination and pre-operative evaluation of Cataract.

#### **Short Essays: (Any – 8)**

**5 X 8 = 40 Marks**

2. Pupillary reflexes and abnormalities.
3. Primary Angle closure glaucoma
4. Congenital glaucoma
5. Gonioscopic grading of angles
6. Toxic optic neuropathy
7. Branch retinal vein occlusion
8. Age related macular degeneration
9. Rhegmatogenous Retinal detachment
10. Intraocular foreign body localisation

#### **Short Answers: (Any – 10)**

**3 X 10 = 30 Marks**

11. Three causes of disc edema
12. Three types of Nystagmus
13. Three syndromes associated with Glaucoma
14. Three syndromic associations of ectopic lentis
15. Three signs of polar cataract
16. Name three modifications of trabeculectomy
17. Adies tonic pupil
18. Solar retinopathy
19. Retinal degenerations
20. Causes of Tractional Retinal detachment
21. Panretinal photocoagulation

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## **B.Sc. in Optometry**

[Time: 3 Hours]

[Max. Marks: 80]

### **IV SEMESTER**

### **PAPER – III (Dispensing Optics)**

**QP CODE: 8442**

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 detail about Various Lens material

#### **Short Essays: (Any – 8)**

**5 X 8 = 40 Marks**

2. Tinted lens
3. Frames for special purposes
4. Optician's ruler
5. Write a note on lens options available for presbyopia
6. Vertex Distance
7. Digital dispensing system
8. How will you insert lens into Supra frames
9. Angles for fitting of frames
10. Abbe's value

#### **Short Answers: (Any – 10)**

**3 X 10 = 30 Marks**

11. Lens Material for sunglasses
12. Contrast enhancing filters
13. Specific gravity of lens
14. Optical center marking
15. Identification features of Convex lens
16. Name different types of frames
17. Geneva lens measure
18. Advantages of high index lens
19. Ghost Images
20. Temple width
21. Aphakia correction

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## **B.Sc. in Optometry**

[Time: 3 Hours]

[Max. Marks: 80]

### **IV SEMESTER**

### **PAPER – IV (Optometric Instrumentation)**

**QP CODE: 8443**

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

#### **Long Questions**

**10X1 = 10 Marks**

1. Brief on Slit lamp

#### **Short Essays: (Any – 8)**

**5 X 8 = 40 Marks**

2. Detail about Corneal topography
3. Procedure of manual lensometer
4. Write about the Indications, clinical uses, components of ERG
5. Trial case lenses
6. Brightness acuity tester
7. Explain phoropter, give its advantages and disadvantages
8. Brief on parts and optics of direct ophthalmoscope
9. Explain in detail Ishihara chart
10. Pre requisites of retinoscopy

#### **Short Answers: (Any – 10)**

**3 X 10 = 30 Marks**

11. Name the types of illumination in slit lamp
12. Indication of pupil examination
13. Principle of Gonioscopy
14. Uses of keratometer
15. Indications of Direct and Indirect Ophthalmoscope
16. Pediatric visual acuity charts.
17. Write about stenopic slit
18. What is IPD? Brief procedure about distance and near IPD
19. Explain the Principle of the Potential acuity meter
20. Uses of synoptophore
21. Filters available in slit lamp

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## **B.Sc. in Optometry**

[Time: 3 Hours]

[Max. Marks: 80]

### **IV SEMESTER**

### **PAPER – V (Basic & Ocular Pharmacology)**

**QP CODE: 8444**

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

#### **Long Questions**

**10X1 = 10 Marks**

1. What is mydriatics and cycloplegics, their uses in diagnostic aids, moa of phenylephrine

#### **Short Essays: (Any – 8)**

**5 X 8 = 40 Marks**

2. Explain in detail about Pharmacodynamics
3. Describe in detail about the main routes of drug administration for ocular conditions?
4. Explain about peri-ocular and intra ocular injection and their uses
5. what are the treatment of dry eye and composition of artificial tears?
6. List the Factors modifying drug action
7. Classifications of nsais and topical nsais used and their indications
8. Write a note on ofloxacin
9. Classification of anti-glaucoma drugs and their uses
10. Classification and mechanism of action of anti-fungal drugs

#### **Short Answers: (Any – 10)**

**3 X 10 = 30 Marks**

11. What is pharmacokinetics?
12. Short note on Pilocarpine
13. What are the preservative in ocular preparation?
14. What are the major side effects of general anaesthetics?
15. Name any four topical antibiotic drugs
16. Stages of anaesthesia
17. How would you manage a patient with an allergic reaction to topical ophthalmic medications?
18. What are the ophthalmic indications for antiviral drug?
19. Define first pass metabolism
20. Uses of fluorescein sodium
21. What is the mechanism of action of local anaesthetics?