August 2011

[KZ 0811] **Sub. Code : 6022**

BACHELOR OF OPTOMETRY DEGREE EXAMINATION

SECOND YEAR

Paper I – OPTOMETRIC OPTICS (I & II)

Q.P. Code : 806022

Time : Three hours **Maximum : 100 marks**

Answer ALL Questions

I. Elaborate on: **(3 x 10 = 30)**

1. Bifocal lenses.
2. Lens surfacing.
3. Toric transposition.

II. Write notes on : **(8 x 5 = 40)**

1. Astigmatic lenses.
2. Aberrations in ophthalmic lenses.
3. Vertex power and vertex distance.
4. Dispensing fits for progressive lenses.
5. Tinted lenses.
6. Antireflective coating.
7. Lens decentration.
8. Classifications and parts of spectacle frames.

III. Short Answers on : **(10 x 3 = 30)**

1. Sphero-cylindrical lenses.
2. Fresnel prisms.
3. Name the materials used for spectacle lenses.
4. Faculties on lens surface.
5. Base curve.
6. Define prism and give the unit of prism power.
7. Name the materials used in making of frames.
8. Miniscus lenses.
9. Properties of cross cylinders.
10. Faults in lens materials.

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[LB 0212] **AUGUST 2012** **Sub. Code: 6022**

B.Sc. OPTOMETRY

SECOND YEAR

PAPER I – OPTOMETRIC OPTICS I & II

Q.P. Code : **806022**

Time : Three hours **Maximum : 100 marks**

(180 Mins) Answer ALL questions in the same order.

I. Elaborate on :	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Multifocal lenses.	7	20	10
2. Size, Shape and Mounting of Ophthalmic lenses.	7	20	10
3. Aberrations in Ophthalmic lens.	7	20	10
II. Write notes on:			
1. Toric lenses.	4	10	5
2. Prismatic effect of sphero cylinder.	4	10	5
3. Tilt induced power.	4	10	5
4. Polaroid lenses.	4	10	5
5. Types of lens material.	4	10	5
6. Lens Maker equation.	4	10	5
7. Tinted lenses.	4	10	5
8. Classify different frame types and parts.	4	10	5
III. Short answer on:			
1. Antiscratch coating.	2	4	3
2. Reflecting filters.	2	4	3
3. Simple transposition.	2	4	3
4. Faults on lens surface.	2	4	3
5. Inspecting the quality of lenses.	2	4	3
6. Properties of cross cylinders.	2	4	3
7. Vertex distance.	2	4	3
8. Knapp's law.	2	4	3
9. Spherical aberration.	2	4	3
10. Aspherical lenses.	2	4	3

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[LC 0212] **FEBRUARY 2013** **Sub. Code: 6022**

B.Sc. OPTOMETRY

SECOND YEAR

PAPER I – OPTOMETRIC OPTICS I & II

Q.P. Code : **806022**

Time : Three hours **Maximum : 100 marks**

Answer ALL questions.

I. Elaborate on : **3 x 10 = 30**

1. Progressive addition lenses (PAL).
2. Lens surfacing.
3. Aberration in ophthalmic lenses.

II. Write notes on: **8 x 5 = 40**

1. Trifocal lenses.
2. Manufacturing of glass.
3. Photo chromatic filters.
4. Lens quality.
5. Forms of lenses.
6. Toric transposition.
   +0.75D sph./+1.25D Cyl. x 35^{o} (BC -6.00D).
7. Draw a frame and marks the parts. Mention the types.
8. Lenticular lenes.

III. Short answer on: **10 x 3 = 30**

1. Toughened lenses.
2. Toric lens.
3. Sag formula.
4. Types of frame construction.
5. Back vertex distances.
6. Optic centre.
7. Types of Asperical lenses.
8. Pantoscopic tilt.
9. Simple transposition.
   +2.00D sph. / +0.75D cyl. x 90^{o}
10. Units of prism power.

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[LD 0212] **AUGUST 2013** **Sub.Code :6022**

B.SC. OPTOMETRY
SECOND YEAR
PAPER I – OPTOMETRIC OPTICS (I & II)
Q.P. Code: 806022

Time: Three hours **Maximum : 100 Marks**

Answer All questions

I Elaborate on: **(3x10 =30)**

1. Bifocal lenses
2. Frame dimensions and lens dimensions
3. Progressive addition lenses

II. Write notes on: **(8 x 5 = 40)**

1. Reflections from spectacle lenses
2. Absorptive glasses
3. Toughened lenses
4. Photochromic lenses
5. Glazing
6. Astigmatic lenses
7. Vertex power and vertex distance
8. Protective lenses

III. Write short answers on: **(10 x 3 = 30)**

1. Cemented bifocals
2. Define prism and give the unit of prism power
3. Fresnel Prisms
4. Differential prismatic effects
5. Name the materials used in making of frames
6. Types of coatings used in lenses
7. Materials used for spectacle lenses
8. Aspheric lenses
9. Spherocylindrical lenses
10. Prentice's rule

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[LE 0212] **FEBRUARY 2014** **Sub.Code :6022**

B.SC. OPTOMETRY
SECOND YEAR
PAPER I – OPTOMETRIC OPTICS (I & II)
Q.P. Code: 806022

Time: Three hours **Maximum : 100 Marks**

Answer All questions

I Elaborate on: **(3x10 =30)**

1. Types of frames, its constructions and markings
2. Tinted and protective lenses
3. Progressive addition lenses

II. Write notes on: **(8 x 5 = 40)**

1. Lens shapes
2. Toric transposition
3. Fused bifocals
4. Rotary prisms and effective prism power in near vision
5. Inspecting the quality of lenses
6. Ophthalmic filters
7. Photochrome lenses
8. Bifocal lenses

III. Write short answers on: **(10 x 3 = 30)**

1. Vertex distance
2. Vertex power
3. Dioptre
4. Ghost images
5. Reflections in bifocals at the dividing line
6. Spherocylindrical
7. Aspheric lenses
8. Prentice's rule
9. Absorptive glasses
10. Meniscus lenses

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[LF 0212] **AUGUST 2014** **Sub.Code :6022**

SECOND YEAR - B.Sc. OPTOMETRY
PAPER I – OPTOMETRIC OPTICS (I & II)

Q.P. Code: 806022

Time: Three Hours **Maximum : 100 Marks**

Answer All Questions

I. Elaborate on: **(3 x 10 = 30)**

1. Aberrations in ophthalmic lenses
2. Toric transposition with suitable example
3. Lens surfacing

II. Write notes on: **(8 x 5 = 40)**

1. Lens forms
2. Inspecting the quality of lenses
3. Lens maker equation
4. Vertex power and vertex distance
5. Trifocal lenses
6. Lenticular lenses
7. Reflections from spectacle lenses
8. Terminology of Bifocals

III. Write short answers on: **(10 x 3 = 30)**

1. Prentice rule
2. Ghost images
3. Meniscus lenses
4. Base curve
5. Name the materials used in making of frames
6. Pantoscopic tilt
7. Dispensing of PAL's
8. Characteristics of tinted lenses
9. Types of glazing
10. Toric lens

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[LG 0215] **FEBRUARY 2015** **Sub.Code :6022**

B.Sc. OPTOMETRY

SECOND YEAR

PAPER I – OPTOMETRIC OPTICS - (I and II)

Q.P. Code: 806022

Time: Three Hours **Maximum : 100 Marks**

Answer All Questions

I. Elaborate on: **(3 x 10 = 30)**

1. Size, shape and mounting of ophthalmic lenses.
2. Bifocals.
3. Interpupillary distance (IPD).

II. Write notes on: **(8 x 5 = 40)**

1. Glazing.
2. Tinted lenses.
3. Indications and contraindications of PAL's.
4. Aspherical lenses.
5. Factors influencing photochromatic effects of lens.
6. Ophthalmic prisms.
7. Manufacturing of glasses.
8. Crutch lenses.

III. Write short answers on: **(10 x 3 = 30)**

1. Sag formula.
2. Knapp's law.
3. Properties of cross cylinder.
4. Types of lens materials.
5. Cemented bifocals.
6. Optic centre.
7. Anti scratch coatings.
8. Simple transposition + 2.50 D sph./ ─ 0.75 D cyl. X $180^{o.}$
9. Spherocylindrical lenses.
10. Types of bridges.

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[LH 0815] **AUGUST 2015** **Sub. Code: 6022**

B.Sc. OPTOMETRY

SECOND YEAR

PAPER I – OPTOMETRIC OPTICS - (I & II)

Q.P. Code: 806022

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Tinted and Protective lenses.
2. Types of frame, constructions and markings.
3. Lens surfacing.

II. Write notes on: **(8 x 5 = 40)**

1. Cross cylinder.
2. Lenticular Lenses.
3. Inter papillary distance.
4. Vertex power and distance.
5. Trifocal lenses.
6. Definition of Prism, unit of prism power, notation and uses of prism.
7. Toric transposition.
8. Lens decentration.

III. Short Answers on: **(10 x 3 = 30)**

1. Anti scratch coating.
2. Spherical aberration.
3. Sag Formula.
4. Back Vertex distance.
5. Aspheric lenses.
6. Prentice rule.
7. Base Curve.
8. Meniscus Lenses.
9. Types of glazing.
10. Pantoscopic tilt.

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[LI 0216] FEBRUARY 2016 **Sub.Code :6022**

B.Sc. OPTOMETRY

SECOND YEAR

PAPER I – OPTOMETRIC OPTICS - (I and II)

Q.P. Code: 806022

Time: Three Hours **Maximum : 100 Marks**

Answer All Questions

I. Elaborate on: **(3 x 10 = 30)**

1. Multifocal Lenses.
2. Lens Surfacing.
3. Classification of Spectacle frames and elaborate o materials, weight, Construction and Measurements.

II. Write notes on: **(8 x 5 = 40)**

1. Lens decentration.
2. Fresnel Prism.
3. Anti reflective coating.
4. Lens maker equation.
5. Interpupillary distance.
6. Prismatic effect of spherocylinder.
7. Lenticular lenses.
8. Rotatary prisms and effective prism power in near vision.

III. Short answers on: **(10 x 3 = 30)**

1. Vertex distance.
2. Prentice rule.
3. Sag formula.
4. Aspheric lenses.
5. Pantoscopic tiltis.
6. Base curve.
7. Anti Scratch coatings.
8. Bifocals.
9. Types of glazing.
10. Properties of cross cylinder.

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[LJ 0816] AUGUST 2016 **Sub.Code :6022**

B.Sc. OPTOMETRY

SECOND YEAR

PAPER I – OPTOMETRIC OPTICS - (I and II)

Q.P. Code: 806022

Time: Three Hours **Maximum : 100 Marks**

Answer All Questions

I. Elaborate on: **(3 x 10 = 30)**

1. Aberrations in ophthalmic lenses.
2. Toric transposition with example.
3. Progressive Addition lenses (PAL).

II. Write notes on: **(8 x 5 = 40)**

1. Photochromatic Filters.
2. How to inspect quality of lens?
3. Bifocals.
4. Types of lens materials.
5. Classify different frame types and parts.
6. Polaroid Lenses.
7. Tilt induced power.
8. Vertex power and Vertex distance.

III. Short answers on: **(10 x 3 = 30)**

1. Fresnel Prisms.
2. Knapp’s law.
3. Spherical aberration.
4. Simple Transposition.
5. Optic centre.
6. Toughened lenses.
7. Meniscus lenses.
8. Antiscratch coatings.
9. Ghost Images.
10. Faults on lens surface.

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[LK 0217] FEBRUARY 2017 **Sub.Code :6022**

B.Sc. OPTOMETRY

SECOND YEAR

PAPER I – OPTOMETRIC OPTICS - (I and II)

Q.P. Code: 806022

Time: Three Hours **Maximum : 100 Marks**

Answer All Questions

I. Elaborate on: **(3 x 10 = 30)**

1. Explain in detail about different types of spectacle lens tints and coatings.
2. Explain the spectacle lens manufacturing process.
3. Write in detail about different types of spectacle frames.

II. Write notes on: **(8 x 5 = 40)**

1. Photochromic lenses.
2. Lens decentration.
3. Properties of cross cylinders.
4. Aspherical lenses.
5. What is Fresnel prism? What are the uses of Fresnel prisms?
6. Boxing system.
7. Explain about spectacle lens quality inspection procedures. Name few lens quality defects.
8. Bifocal lenses.

III. Short answers on: **(10 x 3 = 30)**

1. Abbe value.
2. Polaroid lens.
3. What are the advantages of polycarbonate lenses?
4. Transpose: + 3.00 DS / - 1.50 DC X 70.
5. Define prism and give the unit of prism power.
6. Pantascopic tilt.
7. Toughened lens.
8. Fused bifocal.
9. Types of bridges.
10. Meniscus lens.

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[LL 0817] AUGUST 2017 **Sub.Code :6022**

B.Sc. OPTOMETRY

SECOND YEAR

PAPER I – OPTOMETRIC OPTICS - (I and II)

Q.P. Code: 806022

Time: Three Hours **Maximum : 100 Marks**

Answer All Questions

I. Elaborate on: **(3 x 10 = 30)**

1. Frame construction, measurements and markings.
2. Write in detail about the designs, advantages and disadvantages of progressive addition lenses.
3. Write in detail about various spectacle lens materials.

II. Write notes on: **(8 x 5 = 40)**

1. Aberrations in ophthalmic lenses.
2. Protective lenses.
3. Types of reflections in ophthalmic lenses and ways to avoid them.
4. Manufacturing of glasses.
5. Toughened lenses.
6. Types of bifocal lens segments.
7. Explain about spectacle lens quality inspection procedures. Name few lens quality defects.
8. Properties of cross cylinders.

III. Short answers on: **(10 x 3 = 30)**

1. Mirror coating.
2. Choice of spectacle lenses and frames for children.
3. Prentice rule.
4. Cemented bifocal.
5. Crutch spectacles.
6. Lens forms.
7. Aspheric lenses.
8. Transpose: - 4.00 DS / + 1.25 DC X 180.
9. Sag formula.
10. Ophthalmic prisms.

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