

**DIPLOMA IN OPTOMETRY TECHNOLOGY****SECOND YEAR****PAPER III – OPTOMETRIC INSTRUMENTS***Q.P. Code : 841513***Time : Three Hours****Maximum : 100 marks****Answer ALL questions in the same order.****I. Elaborate on:**

Pages (Max.)	Time (Max.)	Marks (Max.)
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- |  |   |         |    |
|--|---|---------|----|
| 1. Give the names of the charts used for testing distance and near visual Acuity. Write the procedure of testing distance visual acuity. | 7 | 20 min. | 10 |
| 2. Types of retinoscopes and their merits and demerits. Write the procedure of cycloplegic retinoscopy.                                  | 7 | 20 min. | 10 |
| 3. Automated perimetry.  | 7 | 20 min. | 10 |

**II. Write notes on:**

- |  |   |        |   |
|--|---|--------|---|
| 1. Maddox wing.  | 4 | 9 min. | 5 |
| 2. Pachymetry.   | 4 | 9 min. | 5 |
| 3. Merits and demerits of indirect and direct ophthalmoscopes.     | 4 | 9 min. | 5 |
| 4. Bjerrum's screen.   | 4 | 9 min. | 5 |
| 5. Procedure of testing with Amsler's grid and its interpretation. | 4 | 9 min. | 5 |
| 6. Hess screen.  | 4 | 9 min. | 5 |
| 7. Description of trial set and its accessories. Give their uses.  | 4 | 9 min. | 5 |
| 8. Schirmer's test and its results.                                | 4 | 9 min. | 5 |
| 9. Indications for FFA.  | 4 | 9 min. | 5 |
| 10. Pinhole.   | 4 | 9 min. | 5 |

**III. Short Answers on:**

- |   |   |        |   |
|---|---|--------|---|
| 1. Red and green filters.                                 | 1 | 3 min. | 2 |
| 2. Uses of prism bar.                                     | 1 | 3 min. | 2 |
| 3. Uses of Jackson's cross cylinder.                      | 1 | 3 min. | 2 |
| 4. Uses of lensometer.                                    | 1 | 3 min. | 2 |
| 5. Uses of corneal topography.                            | 1 | 3 min. | 2 |
| 6. Types of gonioscopes.                                  | 1 | 3 min. | 2 |
| 7. IOL power calculation.                                 | 1 | 3 min. | 2 |
| 8. Name the surgical instruments used for trabeculectomy. | 1 | 3 min. | 2 |
| 9. Methods of urine sugar estimation.                     | 1 | 3 min. | 2 |
| 10. Uses of Maddox rod.                                   | 1 | 3 min. | 2 |

[LC 0212]

FEBRUARY 2013

Sub. Code: 1513

**DIPLOMA IN OPTOMETRY TECHNOLOGY**

**SECOND YEAR**

**PAPER III – OPTOMETRIC INSTRUMENTS**

*Q.P. Code : 841513*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Write in detail about Applanation Tonometry.
2. Describe in detail about any four methods of slitlamp illumination techniques.
3. Give the principle of keratometry and describe the procedure of manual keratometry.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Procedure of direct ophthalmoscopy.
2. Merits and demerits of spot and streak retinoscopes.
3. Snellen's chart.
4. Automated lensometer.
5. Procedure of obtaining blood sugar level using Glucometer.
6. Pinhole.
7. Explain the procedure of measuring blood pressure.
8. Classify perimeter and mention the various field defects in glaucoma.
9. IOL power calculation.
10. Principle of Auto refractometer and its uses.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. Give names of four tonometer.
2. Uses of Maddox rod.
3. Two methods to measure corneal curvature.
4. Three tests for assessing dry eye.
5. Normal range of blood sugar level.
6. Uses of prism bar.
7. Bjerrum's screen.
8. Parts of Schiottz's tonometer.
9. Two methods to measure peripheral visual fields.
10. Uses of pachymeter.

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[LD 0212]

AUGUST 2013

Sub. Code: 1513

**DIPLOMA IN OPTOMETRY TECHNOLOGY**

**SECOND YEAR**

**PAPER III – OPTOMETRIC INSTRUMENTS**

*Q.P. Code : 841513*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Tests for dry eyes.
2. Define Perimetry and various examination methods.
3. A-Scan.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Principles of Direct Ophthalmoscope.
2. Different types of distant vision charts.
3. Auto refractometer.
4. Corneal Topography.
5. Tests for Lacrimal duct patency.
6. Non -Contact tonometer.
7. Parts of Operating microscope.
8. Direct Gonioscopy.
9. Vision drum - Description and Uses.
10. Optics of slit lamp biomicroscopy.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. Maddox wing.
2. Maddox rod.
3. Bjerrum's screen.
4. Principle of Keratometry.
5. Automated Lensometer.
6. Break -up time.
7. List the name of instruments used in cataract surgery.
8. Amsler chart.
9. Prism bar.
10. Indentation tonometers.

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[LE 0212]

FEBRUARY 2014

Sub. Code: 1513

**DIPLOMA IN OPTOMETRY TECHNOLOGY**

**SECOND YEAR**

**PAPER III – OPTOMETRIC INSTRUMENTS**

*Q.P. Code : 841513*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Explain the procedure for testing distance visual acuity.  
Name the different charts used for testing distance and near visual acuity.
2. Explain the optics of manual lensometer.  
Explain the procedure of spectacle lens power measurement with this instrument.
3. What is A-scan? Why is it done? Explain the different types of A-scan techniques.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Maddox rod – construction and uses.
2. What are the possible sources of error in retinoscopy?
3. Explain the principle of tonometry. Name the different types of tonometers.
4. Name the components of slit lamp, and explain the optics.
5. Name the instrument for measuring blood sugar levels and explain the procedure.
6. What are the indications for Amsler's grid charting? Explain the procedure and interpretation of the results.
7. Tabulate any 5 differences between a direct ophthalmoscope and an indirect ophthalmoscope.
8. Kinetic perimeters.
9. Explain Schirmer's test.
10. How is the patency of the lacrimal drainage system tested?

**III. Short Answers on:**

**(10 x 2 = 20)**

1. ETDRS chart.
2. What are the uses of synaptophore?
3. Maddox wing.
4. Pinhole and its uses.
5. Uses of concave mirror retinoscopy.
6. What are gonioscopes? What are the different types of gonioscopes?
7. Define One-position keratometer. Give an example.
8. What is a pachymeter? What are the different types of pachymeters?
9. Placido's disc.
10. List the names of surgical instruments used for glaucoma surgery.

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[LF 0212]

AUGUST 2014

Sub. Code: 1513

**DIPLOMA IN OPTOMETRY TECHNOLOGY**

**SECOND YEAR**

**PAPER III – OPTOMETRIC INSTRUMENTS**

*Q.P. Code : 841513*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Write an essay on Retinoscopy – principle, optics, types and procedure.
2. Pre operative assessment of a patient before cataract surgery.
3. What is tonometry? Explain the different instruments used for the same - principle, procedure , merits and demerits.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Prisms in ophthalmology.
2. Hess screen.
3. Cross cylinder.
4. Lensometer.
5. Placido s disc.
6. Amsler grid.
7. Dry eye.
8. Automated perimetry.
9. Synoptophore.
10. Types of Intra ocular lenses.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. Syringing for nasolacrimal duct patency.
2. 2 differences between LogMAR and Snellen charts.
3. 2 uses of prism bar.
4. Near point of Accommodation.
5. 2 uses of Maddox rod.
6. Different lenses used in indirect ophthalmoscopy.
7. Name 2 tests used in dry eye evaluation.
8. Name 2 indirect goniolescopes.
9. Name 2 tests done on patients with Keratoconus.
10. Pin hole.

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[LG 0215]

FEBRUARY 2015

Sub. Code: 1513

**DIPLOMA IN OPTOMETRY TECHNOLOGY**

**SECOND YEAR**

**PAPER III – OPTOMETRIC INSTRUMENTS**

*Q.P. Code : 841513*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Describe the different vision charts used in ophthalmic examination.  
Add a note on Streak Retinoscopy.
2. What is tonometry? Explain the different instruments used for the same - principle, procedure , merits and demerits.
3. Describe the procedure of Small incision cataract surgery writing in detail about the different instruments used in the surgery.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Prism Bar.
2. RAF ruler.
3. Jackson's cross cylinder.
4. Lensometer.
5. Pachymeter.
6. Schirmer s test.
7. Indirect ophthalmoscope.
8. Gonioscopy.
9. Bjerrum tangent screen.
10. Autoclave.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. Near point of convergence.
2. Phoria.
3. Use of pinhole.
4. Signs of neutralisation in retinoscopy.
5. Atropine.
6. Uses of corneal topography.
7. Retroillumination in slit lamp.
8. Name 2 diseases where Amsler grid can be used?
9. 2 important indications for Fundus Fluorescein Angiogram.
10. What is trabeculectomy?

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[LH 0815]

AUGUST 2015

Sub. Code: 1513

**DIPLOMA IN OPTOMETRY TECHNOLOGY**

**SECOND YEAR**

**PAPER III – OPTOMETRIC INSTRUMENTS**

*Q.P. Code : 841513*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. What is Maddox rod? Write the procedure of Maddox rod in ophthalmology.
2. What is Jackson Gross Cylinder? Write about Jackson Gross Cylinder.
3. Write in detail about Direct Ophthalmoscope.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Write about Maddox wing.
2. Identification of different types of lenses in trial set.
3. Write about different types of Retinoscope.
4. Uses of prisms in ophthalmology.
5. Write about Auto-Refractometer.
6. Write about Dry eye tests.
7. Write about Amsler charts.
8. Differentiate snellen's and LogMAR chart.
9. Define Glaucoma. Write about surgical instruments in Glaucoma.
10. Define keratometry. Write in detail about keratometer.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. RAF ruler.
2. Define visual acuity.
3. What is corneal topography?
4. What is perimetry?
5. What is glucometer?
6. Principle of Jackson Gross Cylinders.
7. Uses of Tonometer.
8. Uses of slit-lamp.
9. Uses of pinhole.
10. Lists the visual acuity charts.

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[LI 0216]

FEBRUARY 2016

Sub. Code: 1513

**DIPLOMA IN OPTOMETRY TECHNOLOGY**

**SECOND YEAR**

**PAPER III – OPTOMETRIC INSTRUMENTS**

*Q.P. Code : 841513*

**Time : Three Hours**

**Maximum : 100 marks**

**Answer ALL questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Define keratometry. Write in detail about keratometer.
2. Write in detail about indirect Ophthalmoscope.
3. Define visual acuity. Write about snellen's and LogMAR visual acuity charts.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Expand RAF ruler. Write about RAF ruler.
2. Write about Jackson Gross Cylinders.
3. What is pinhole? Write about clinical significance of pinhole.
4. Write about A-scan.
5. Write about different types of Retinoscope.
6. Identification of different types of lenses in trial set.
7. Write about Dry eye tests.
8. Uses of prisms in ophthalmology.
9. Write about Auto-Refractometer.
10. Write about Illumination system in Slit-Lamp.

**III. Short Answers on:**

**(10 x 2 = 20)**

1. Uses of Synoptophore.
2. Write SRK-I and SRK-II formula for IOL calculation.
3. Define Perimetry.
4. Define Goinsocopy.
5. Lists the surgical instruments for cataract surgery.
6. What is glucometer?
7. Uses of Tonometer
8. Uses of slit-lamb.
9. Lists the visual acuity charts.
10. Uses of Retinoscope.

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**DIPLOMA IN OPTOMETRY TECHNOLOGY**  
**SECOND YEAR**  
**PAPER III – OPTOMETRIC INSTRUMENTS**

*Q.P. Code: 841513*

**Time: Three Hours**

**Maximum : 100 Marks**

**Answer All Questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Write in detail about the type of retinoscopes and the procedure of cycloplegic retinoscopy.
2. Write in detail about the prisms and its uses in ophthalmology.
3. Write about the types of refractometer and discuss in detail about auto refractometer.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Jacksons cross cylinder.
2. Standard test charts and their uses.
3. Synoptophore.
4. RAF ruler.
5. Maddox wing.
6. Red and green goggles.
7. Relieving prism.
8. Landolts ring.
9. B Scan.
10. Plastic frames nomenclature.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Pin hole.
2. WFDT.
3. Placido disc.
4. Tinted lenses.
5. Trial frame design.
6. Astigmatic fan.
7. Ischiaras chart.
8. Stenopic slit.
9. Maddox rod.
10. Titmus test.

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[LK 0217]

FEBRUARY 2017

Sub.Code :1513

**DIPLOMA IN OPTOMETRY TECHNOLOGY  
SECOND YEAR**

**PAPER III – OPTOMETRIC INSTRUMENTS**

*Q.P. Code: 841513*

**Time: Three Hours**

**Maximum : 100 Marks**

**Answer All Questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Mention the types of tonometer, it's principle and uses.
2. Principle behind slit lamp biomicroscopy and it's uses.
3. Discuss in detail about keratometer.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Maddox rod.
2. Lenso meter.
3. Goldman perimeter.
4. Schiottz tonometer.
5. Placido disc.
6. Plastic frames nomenclature.
7. Landolts broken ring test.
8. B scan.
9. Foci meter.
10. TANGET screen.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Colour vision.
2. Snellen's chart.
3. Synoptophore.
4. Cross cylinder.
5. Relieving prism.
6. Streak retinoscopy.
7. Resilens.
8. Geneva lens measure.
9. Photochromatic lens.
10. Diplopia chart.

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