August 2011

[KZ 0811] **Sub. Code: 1503**

DIPLOMA IN OPTOMETRY TECHNOLOGY

FIRST YEAR

Paper III – PHYSICAL, GEOMETRIC AND VISUAL OPTICS

Q.P. Code: 841503

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

Answer **ALL** questions.

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

1. What is astigmatism? What are the possible cause of astigmatism and its symptoms and its treatment?
2. Mention the steps that are followed for subjective refraction and explain it?
3. What are the characteristics of the image formed using a concave & convex lens for all location of the object?

II. Write notes on : **(10 x 5 = 50)**

1. Define prism and the uses of prism.
2. How to calculate the power of lens?
3. What is Anisometropia and its types?
4. What are the uses of Jackson Cross Cylinder and explain it?
5. How to conduct Screening Camp?
6. Write down the prescription for the following?
   a. RE = +2.0Ds / +1.0 x 165º 6/6
      LE = +1.0Ds / -0.50 x 180º 6/6
      NVB Add +2.0Ds
   b. RE = -1.75Ds / -1.0 x 75º 6/6
      LE = -1.0 Ds/ -0.75 x 90º 6/6
      Add +3.0 Ds N6
7. Draw the diagram of Strum's Conoid and explain it?
8. Write down the procedures in performing Retinoscopy?
9. What are the other properties of light and explain?
10. What is rule of thumb for testing Anisokonia?

III Short Answer on : **(10 x 2 = 20)**

1. What are the properties of light?
2. What is reflection?
3. Define polarization?
4. What is against the rule astigmatism?
5. What is manifest Hypermetropia?
6. Define Scattering.
7. What is principal axis?
8. What is lens and its types?
9. Define irregular astigmatism.
10. Transpose the following:
    a) +1.50Ds /+1.0 x 165º (b). -2.50Ds / +1.50 x 15º

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February 2012

[LA 0212] **Sub. Code: 1503**

DIPLOMA IN OPTOMETRY TECHNOLOGY

FIRST YEAR

PAPER III – PHYSICAL, GEOMETRIC AND VISUAL OPTICS

Q.P. Code: **841503**

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

Answer ALL questions.

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

1. Explain about the refractive error of Hypermetropia.
2. What is Anisometropia? Explain the causes, Types and treatment.
3. Mention the tools used in evaluation of astigmatism.

II. Write notes on : **(10X 5 = 50)**

1. How to correct Hypermetropia by scientific method?
2. Mention the treatment for amblyopia.
3. Explain the Retinoscopy procedure.
4. Explain Strum's Conoid with neat diagram.
5. What are the laws of reflection and refraction?
6. Explain about Jackson Cross Cylinder and its uses?
7. Write the down the prescription of the following
   a. RE = -2.0Ds/ -1.50 x 75º 6/6
      LE = -2.50 Ds/ -1.0 x 90º 6/6
      ADD +2.50 Ds N6
   b. RE = +2.50DS/ +1.0 x 180º 6/6
      LE = +1.0 Ds/ +1.0 x 165 º 6/6
      ADD +2.0 Ds N6
8. What is vergence and explain positive and negative vergence?
9. Write the "Far point" concept?
10. What are the symptoms of Presbyopia and how it is treated?

III. Short Answers on : **(10X 2 = 20)**

1. What is refractive index?
2. What is focal length?
3. What is prism diopter?
4. Explain decentration.
5. What is diffraction?
6. What is meridional amblyopia?
7. What is regular astigmatism?
8. Mention the treatments of myopia?
9. What is occlusion therapy?
10. What is critical angle?

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[LB 0212] **AUGUST 2012** **Sub. Code: 1503**

DIPLOMA IN OPTOMETRY TECHNOLOGY

FIRST YEAR

PAPER III – PHYSICAL, GEOMETRIC & VISUAL OPTICS

Q.P. Code : **841503**

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. Hypermetropic refractive error.	7	20	10
2. Objective refraction – principles and description of streak in refraction.	7	20	10
3. Amblyopia and its management.	7	20	10
II. Write Notes on:			
1. Spherical lenses, cylindrical lenses, spherocylindrical lens – method of identification.	4	9	5
2. Explain real and virtual image.	4	9	5
3. Sturms conoid.	4	9	5
4. Duochrome test.	4	9	5
5. Presbyopia management.	4	9	5
6. Jackson Cross Cylinder.	4	9	5
7. Explain transposition.	4	9	5
8. How do you measure power of lens?	4	9	5
9. Uses of prims.	4	9	5
10. Cycloplegic refraction.	4	9	5
III. Short Answers on:			
1. Interference.	1	3	2
2. Polarisation.	1	3	2
3. Fluorescence.	1	3	2
4. Aniseikonia.	1	3	2
5. Spherical equivalent.	1	3	2
6. Refractive index.	1	3	2
7. Aphakia.	1	3	2
8. Define Astigmatism.	1	3	2
9. Principle of retinoscope.	1	3	2
10. How do you specify axis of the lens?	1	3	2

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[LC 0212] FEBRUARY 2013 Sub. Code: 1503

DIPLOMA IN OPTOMETRY TECHNOLOGY

FIRST YEAR

PAPER III – PHYSICAL, GEOMETRIC & VISUAL OPTICS

***Q.P. Code :* 841503**

Time : Three hours Maximum : 100 marks

Answer ALL questions.

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

1. Elaborate on Aphakic refractive status, refraction and glass prescription in Aphakia.
2. Refraction eye camp.
3. Elaborate on the steps of subjective and objective retinoscopy.

II. Write Notes on: (10 x 5 = 50)

1. Crossed cylinder
2. Use of prisms in ophthalmology
3. Management of amblyopia
4. Duochrome test
5. Strum's conoid
6. Cycloplegic refraction
7. Explain real and virtual image and formation of images using convex lens
8. How do you calculate spherical equivalent?
9. How do you identify a spherical lens, cylindrical lens and a prism using neutralization method?
10. Myopia

III. Short Answers on: (10 x 2 = 20)

1. Define Hypermetropia
2. Define Aniseikonia
3. Types of Amblyopia
4. Cycloplegics
5. Define presbyopia
6. Post mydriatic test
7. Vision charts for adults
8. Vision charts for children
9. Spherocylindrical lens
10. Image magnification

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[LD 0212] AUGUST 2013 Sub. Code: 1503

DIPLOMA IN OPTOMETRY TECHNOLOGY

FIRST YEAR

PAPER III – PHYSICAL, GEOMETRIC AND VISUAL OPTICS

Q.P. Code : 841503

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

Answer all questions

I Elabrate on **3 x 10 = 30**

1. Define Hypermetropia. Give its components, clinical features and management
2. Define Anisometropia. Give the etiology, clinical types, diagnosis and management
3. Drugs used in refraction and interpretation of retinoscopic values

II Write notes on **10 x 5 = 50**

1. Convex lenses
2. Pseudophakia
3. Conducting a screening camp for cataract
4. Duochrome test
5. Pathological Myopia
6. Write down the glass prescription for the following retinoscopy values

RE	+ 3.50
	+2.50

LE	+ 2.00
	+1.00

Age – 30 years ; Working distance 1 metre ; Drug used – Cyclopentolate 1 %

7. Laws of reflection and refraction
8. Uses of Prisms in ophthalmology
9. Jackson's cross cylinder
10. Transpose and give the type of refractive error
    a) + 0.75 Dsph + 1.00 Dcyl x 75^{o}
    b) – 1.00 Dsph + 1.50 Dcyl x 180^{o}

III Write short answer on **10 x 2 = 20**

1. Give two properties of Light
2. Polarization
3. Properties of LASER
4. Illumination
5. Linear magnification
6. Neutralisation
7. Unit of a Prism
8. Types of lenses
9. With the rule and against the rule astigmatism
10. Define Amblyopia

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