**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[AHS 0321]** **MARCH 2021** **Sub. Code: 2742**

**(AUGUST 2020 EXAM SESSION)**

**B.OPTOM**

**SECOND YEAR (Regulation 2018-2019)**

**PAPER II – VISUAL OPTICS**

***Q.P. Code : 802742***

**Time: Three hours** **Answer ALL Questions** **Maximum: 100 Marks**

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

1. Cardinal points of the eye
2. Different visual acuity charts and their applications
3. Write in detail about aphakia

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

1. Pathological myopia
2. Signs of pseudophakia
3. Components of optical system
4. Convergence insufficiency
5. Fogging
6. Refracting surface of the eye
7. Aniseikonia
8. Anomalies of accommodation

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

1. Transpose : +4.00 D Sph/ -1.00 D Cyl x55
2. Facultative hypermetropia
3. Hirschberg test
4. Astigmatic fan
5. RAF ruler
6. Cycloplegia
7. Magnification
8. Binocular refraction
9. Corneal curvature and its measurement
10. Angle alpha and kappa

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[AHS 0222]** **FEBRUARY 2022** **Sub. Code: 2742**
**(AUGUST 2021 EXAM SESSION)**

**B.OPTOM**
**SECOND YEAR (Regulation 2018-2019)**
**PAPER II – VISUAL OPTICS**
***Q.P. Code : 802742***

**Time: Three hours** **Answer ALL Questions** **Maximum: 100 Marks**

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

1. Write in detail about the drugs used in refraction and the procedure of cycloplegic retinoscopy.
2. AC/A ratio and anomalies of accommodation.
3. Discuss in detail about optics, signs and management of Aphakia

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

1. Sturm's conoid
2. Stereogram
3. Purkinje Sanson images
4. Prism
5. Jackson cross cylinder
6. Define Amblyopia and a note on Anisometropic Amblyopia
7. Axes of eye
8. Binocular balancing

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

1. Define vergence and give its units.
2. Define angle kappa and give its importance
3. Why is cornea considered the major refracting system of the eye?
4. Types of myopia
5. Use of pinhole
6. Maddox wing
7. Aniseikonia
8. Principles of keratometer
9. Post mydriatic test
10. Magnification

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[AHS 0922] SEPTEMBER 2022 Sub. Code: 2742**
**(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)**

**B.OPTOM**
**SECOND YEAR (Regulation from 2018-2019)**
**PAPER II – VISUAL OPTICS**
***Q.P. Code : 802742***

**Time: Three hours** **Answer ALL Questions** **Maximum: 100 Marks**

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

1. Explain in detail about Anomalies of convergence.
2. Write the principle and methods of retinoscopy. Elaborate on myopia.
3. What is effective power of spectacles? Write in detail about classification of spectacle frames.

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

1. Aphakia.
2. What is progressive accommodative lens? Write about benefits of PAL.
3. Strum's conoid.
4. What are the uses of prisms in optometry?
5. What is presbyopia? How will you correct presbyopia?
6. Write about corneal curvature and thickness.
7. Correction and management of amblyopia.
8. Cycloplegics.

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

1. RAF ruler.
2. Types of amblyopia.
3. Uses of Jackson cross cylinder.
4. Absolute hypermetropia.
5. Write about various axis of eye.
6. Purkinje images.
7. What is spherical equivalent?
8. What are far and near points of accommodation?
9. Astigmatic fan.
10. What is vergence of partial rays?

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[AHS 0422]** **APRIL 2023** **Sub. Code: 2742**

**B.OPTOM**
**SECOND YEAR (Regulation 2018-2019 onwards)**
**PAPER II – VISUAL OPTICS**
***Q.P. Code: 802742***

**Time: Three hours** **Answer ALL Questions** **Maximum: 100 Marks**

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

1. Discuss in detail about Optics, Signs, and Management of Hypermetropia.
2. Different Visual Acuity Charts and how will you access Visual Acuity in Children?
3. Write in detail about Contact Lenses.

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

1. AC/A ratio.
2. Pseudophakia.
3. Spectacle making.
4. Optical constants of Eye.
5. How will you assess and manage decentration of Lens?
6. Duochrome test.
7. Aniseikonia.
8. Effect of prisms infront of Eye.

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

1. Pantoscopic tilt.
2. Principle of Pinhole.
3. Crutch glasses.
4. Index myopia.
5. Spectacles for U-V light protection.
6. Disadvantages of Aphakic spectacles.
7. Maddox wing.
8. Anisometropic amblyopia.
9. Worth four dot test.
10. How will you measure Axial length of Eyeball?

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[AHS 1123]** **NOVEMBER 2023** **Sub. Code: 2742**

**B.OPTOM**
**SECOND YEAR (Regulation 2018-2019 onwards)**
**PAPER II – VISUAL OPTICS**
***Q.P. Code: 802742***

**Time: Three hours** **Answer ALL Questions** **Maximum: 100 Marks**

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

1. Define Accommodation. Explain in detail about Far and Near point of Accommodation.
2. Explain in detail about of Retinoscopy Reflex based on Speed, Brightness and Thickness.
3. What is Anisometropia. Explain its Causes, Signs, Symptoms and Management.

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

1. What are clinical types of Aniseikonia?
2. Discuss the types of Amblyopia and its treatment.
3. Describe Roving Ring Scotoma in corrected Aphakia with suitable diagram.
4. How would you determine the Corneal curvature?
5. Enumerate the steps in performing Streak Retinoscopy.
6. Describe the steps in prescribing Prisms.
7. Work three examples of Spherical equivalent.
8. Differentiate Regular and Irregular Astigmatism.

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

1. What is Pserdomyopia?
2. Define Anisometropia.
3. What is Latent Hypermetropia and how is it detected?
4. What is Presbyopia?
5. What are far and near points of the Eye?
6. List any three characteristic features of Aphakia.
7. Diagrammatically represent the image formula in Myopia.
8. Define Vergence.
9. What is Consecutive Hypermetropia?
10. Which is the best modality of treatment in Axial Ametropia?

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