Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore - 641 043
Continuous Internal Assessment I April - 2025
II Semester

Class : I UG **Time : 2 Hours**
Branch : OPTOMETRY **Max. Marks : 60**

22BOPC09 - Geometric Optics II

Course Outcomes:
CO1: To apprehend the nature of cylindrical lenses and its relation to eye.
CO2: To inspect the effects of pupil, apertures and field stops.
CO3: To scrutinize aberrations and its impact on our eyes.
CO4: To resolve telescopes and microscopes.
CO5: To decode Gullstrand's schematic eyes..

Part A
Choose the Correct Answer

6 x 1 =6marks

1.The primary cause of spherical aberration in an optical system is CO3K2
a . irregular curvature of lens b. incorrect position of lens
c. small aperture size d.chromatic dispersion

2.Which type of aberration occurs when different wavelengths of light are focused at different points CO3K1
a. Spherical aberration b. chromatic aberration
c. astigmatism d. coma

3. The commonly used eyepiece of the keplerian telecsope is a CO4K1
a. Concave lens b. convex lens
c.Concave mirror d. convex mirrior

4.The image formed by a keplerian telescope is . CO4K3
a. Virtual and erect b. virtual and inverted
c.Real and erect d.Real and inverted

5. The total dioptric power of he schematic eye is…….. CO5K1
a.60D b.48 D
c.58.64 D d.59.64 D

6.The eye can be resolved to.. cardinal points & ...focal lengths in gullstrand's model CO5K1
a. 2,4 b.4,6
c.4,2 d. 6,4

Part B **3 x 6 = 18**
Answer ALL questions
Each answer should not exceed 400 words or two pages

7.A.Discuss on third order aberrations	(or)	CO3K2
7.B.What are higher order aberrations and zernike polynomials?		CO3K1
8.A.Distinguish between telescopes and microscopes	(or)	CO4K1
8.B Write a note on advantages of galilean telesopes		CO4K1
9.A. Write the note on purkinje images with illustration	(or)	CO5K2
9.B.Enumerate the refractive errors of the eye		CO5K2

Part C **3 x 12 = 36**
Answer ALL questions
Each answer should not exceed 800 words or four pages

10.A.Write a note on ways of minimizing aberrations	(or)	CO3K2
10.B.Explain in detail about various aberrations		CO3K2
11.a.Differentiate between Galilean and keplerian telescope.	(o r)	CO4K2
11.b.Explain the use of various telescopes in low vision aids.		CO4K2
12.a.Explain about accommodation and presbyopia	(or)	CO5K2
12.b b. Explain the gull strand's schematic eye		CO5K2

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