



Avinashilingam Institute for Home Science and Higher Education for Women
Coimbatore - 641 043

Continuous Internal Assessment I February - 2025

II Semester

Class : I UG
Branch : OPTOMETRY

Time : 2 Hours
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 following is a correct example for negative cylinder lens only
a. Plano/+3.00DCx20 b. -4.00DS
c. Plano/-2.00DS d. -1.00ds/-4.00dc x 30
 2. The spherical equivalent of +3.00ds/-5.50DC X 20
a. +1.50DS b. -1.50DS
c. +2.50DS d. -2.50DS
 3. The image of iris captured by lens system before the iris is
a. Pupil b. Entrance pupil
c. Cornea d. Exit pupil
 4. The angle of image can be altered by.
a. Field b. Aperture
c. Iris d. pupil
 5. Thehas image with lesser blur.
a. first line of focus b. second line of focus
c. Conoid of Sturm d. CLC
 6. The image of the lens meridian with highest power gets focused
a. far b. closer
c. on the lens d. merge together virtually

Part B

3 x 6 = 18

Answer ALL questions

Each answer should not exceed 400 words or two pages

- 7.a. Discuss on the cylindrical lens and image formation (or) CO1K2
- 7.B. Write a note on Spherical lens CO1K2
- 8.A. What are spherocylindrical lens, give illustration? (or) CO1K1
- 8.B. Write a note on functions of apertures & field stops CO2K1
- 9.A. Write the note on chromatic aberration (or) CO3K2
- 9.B. Transpose +3.00DS/-2.00DCx60 & -2.50DC x50/+5.50DCX 40 CO1K4

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 CLC, conoid of Sturm (or) CO1K1
- 10.B. Explain briefly about cylinders along 2 meridians with illustration CO1K2
- 11.a. Write a note on Apertures, stops and field. (or) CO2K2
- 11.b. Explain Entrance and exit pupils with neat illustration. CO2K1
- 12.a. What are the types of Aberrations (or) CO3K1
- 12.b. What are the ways of reducing aberrations CO3K1
