

First Year B.Sc Optometry Degree Supplementary Examinations

April 2025

Paper III – Physical & Geometrical Optics

(2016 Scheme)

Time: 3 hrs

Max marks: 80

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers*
- *Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers • Draw table/diagrams/flow charts wherever necessary*

Essay:

(2x15=30)

1. What is interference. Explain types of interference and obtain condition for it.
2. Describe any one type of telescope with magnification, advantages and disadvantages.

Short notes

(5x5=25)

3. Spherical aberration.
4. Deviation by thin prism and prism diopter.
5. Rayleigh scattering.
6. Glass slab displacement without deviation.
7. Huygens wave theory.

Answer briefly

(10x2=20)

8. Refractive index.
9. Reflectivity of material.
10. Prentice's rule.
11. Depth of focus.
12. Coherence in laser.
13. Malus's law.
14. Dispersive power of material.
15. Paraxial approximation.
16. Stimulated emission.
17. Simple harmonic oscillations.

Fill in the blanks

(5x1=5)

18. Formula for Brewster's law is _____
19. Relation between focal length and power of lens is _____
20. Grating is working on the principle of _____
21. Example of natural polarizer is _____
22. Lux is a unit of _____
