

**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 \_\_\_\_\_

\*\*\*\*\*