

First Year B.Sc Optometry Degree Supplementary Examinations
April 2024
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. Explain phenomenon of birefringence in detail.
2. For system of two thin lenses discuss cardinal points and obtain power and magnification.

Short notes

(5x5=25)

3. Newton's formula for magnification by lens.
4. Deviation by thin prism and prism diopter.
5. Entrance and exit pupil.
6. Types of diffraction.
7. Rayleigh's criterion for resolution of any optical instrument.

Answer briefly

(10x2=20)

8. How wavelength of light and refractive index are related.
9. State Huygen's principle.
10. Different types of lens shape.
11. Depth of field.
12. Absolute and relative refractive index.
13. Simple harmonic motion.
14. Gullstrand's schematic eye.
15. Tyndall effect.
16. Monochromatic aberrations.
17. Angular dispersion.

Fill in the blanks

(5x1=5)

18. Linear distance between any two consecutive nodes or antinodes is called _____
19. Luminous flux is measured in _____
20. Vision in high intensity of light is called _____ vision.
21. Inverse of focal length of lens is called _____
22. Polarization of light waves proves that light waves are _____ in nature.
