

**ANNAI VIOLET ARTS AND SCIENCE COLLEGE
DEPARTMENT OF PHYSICS**

CONTINUOUS INTERNAL ASSESSMENT-I (ODD SEM)

Subject: Optic & Spectroscopy

Class: III B.Sc., Physics

Max. Marks: 50

Date: 30.08.2022-FN

Sub. Code: SR25A

**PART A (5 × 2 = 10 Marks)
Answer any FIVE questions**

1. Write about spherical aberration
2. Define chromatic aberration
3. List out the reduce the spherical aberration
4. Write the condition for Maxima and Minima
5. State the condition for sustained interference of light waves
6. Give the definition of interference in thin film
7. Mention the condition for bright and dark fringes in Haidinger's fringes

**PART B – (2× 5 = 10 Marks)
Answer any TWO questions**

8. Describe the achromatic combination of prism- Deviation without dispersion
9. Explain achromatic combination of prism- Dispersion without Deviation
10. Explain how to determine the wavelength of light using Newton's rings.

**PART C – (3 × 10 = 30 Marks)
Answer ALL questions**

11. Explain working of Michelson's interferometer with neat diagram
12. Discuss and explain the Resolving power of Telescope
13. Derive an expression for the Resolving power of microscope

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