

**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 ( $5 \times 2 = 10$  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 Hadingers fringes

**PART B – ( $2 \times 5 = 10$  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 – ( $3 \times 10 = 30$  Marks)**

**Answer ALL questions**

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

**Prepared by**  
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