Course Code: PHY 1454 / PHY 1552   **Time: 3 Hr**

Course Title: Geometrical and Physical Optics   **Max. Mark: 75**

Answer any FIVE Questions   **5 x 15 = 75**

1. Explain the refraction by a prism also discuss the minimum deviation in prism.

2. Explain color dispersion and derive the dispersive power and dispersive index when a white light give rise to refracted rays of different colors.

3. Explain human eye and derive the expression for luminance using speed of lens.

4. Derive the magnifying power of an astronomical telescope also obtain the alternative equation for the angular magnification.

5. Discuss the theory of Newton's rings formation and determine the radius of the dark ring.

6. Explain the Fraunhofer diffraction at double slit and the condition for interference and diffraction maxima and minima.

7. Give in detail the theory of plane transmission grating.

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