Lesson Plan

Physics- PH-302

Paper VI: Wave and optics I

Teacher name: Dr. SK Pandey

October 2020

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| Interference by Division of Wave front: Young’s double slit experiment, Coherence, Conditions of interference, Fresnel's biprism and its applications to determine the wavelength of sodium light and thickness of a mica sheet, Lloyd's mirror, Difference between Bi-prism and Llyod mirror fringes, phase change on reflection. |

November 2020

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| Unit 2: Interference II Interference by Division of Amplitude: Plane parallel thin film, production of colors in thin films, classification of fringes in films, Interference due to transmitted light and reflected light, wedge shaped film, Newton's rings, Interferometer: Michelson's interferometer and its applications to (i) Standardization of a meter (ii) determination of wavelength. |

December 2020

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| Unit- 3: Diffraction I Fresnel’s diffraction: Fresnel’s assumptions and half period zones, rectilinear propagation of light, zone plate, diffraction at a straight edge, rectangular slit and circular aperture, diffraction due to a narrow slit and wire. |

January2021

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| Unit -4: Diffraction II Fraunhoffer diffraction: single-slit diffraction, double-slit diffraction, N-slit diffraction, plane transmission granting spectrum |

February 2021

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| ,dispersive power of grating, limit of resolution, Rayleigh's criterion, resolving power of telescope and a grating. Differences between prism and grating spectra. |