**PG.GOVT COLLEGE FOR GIRLS, SECTOR-42, CHANDIGARH**

**Teaching Plan Odd Semester (For Ongoing Classes UG-PG)**

**Session (2021-2022)**

**Class: B.Sc 3th Semester**   **Name of the Teacher: Dr. Harjeet Kaur**

**Subject: Optics Period : 4th**

**Paper : B Room No : 129**

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| **S. No** | **Dates** | **Topics to be covered** |
| Week 1 | 11-08-2021 to 14-08-2021 | Concept of coherence, spatial and temporal coherence, coherence time, coherence length, area of coherence. |
| Week 2 | 16-08-2021 to 21-08-2021 | Conditions for observing interference fringes, Interference by wavefront division and amplitude division. Young’s double Slit experiment. |
| Week 3 | 23-08-2021 to 28-08-2021 | Lloyd’s mirror and Fresnel’s biprism, Phase change on reflection |
| Week 4 | 31-08-2021 to 04-09-2019 | Newton’s rings, Michelson interferometer- working, principle and nature of fringes |
| Week 5 | 06-09-2021 to 11-09-2021 | Interference in thin films, Role of interference in anti-reflection. |
| Week 6 | 13-09-2021 to 18-09-2021 | Multiple beam interference. Fabry – Perot Interferometer, nature of fringes |
| Week 7 | 20-09-2021 to 25-09-2021 | Diffraction: Huygen - Fresnel theory of Diffraction. Fresnel’s half period zones, zone plates. Distinction between Fresnel and Fraunhofer diffraction. |
| Week 8 | 27-09-2021 to 01-10-2021 | Fraunhofer diffraction due to single slit and intensity distribution, double slits and multiple slits (qualitative). |
| Week 9 | 04-10-2021 to 09-10-2021 | Fraunhofer diffraction at rectangular (qualitative discussion) and circular apertures. |
| Week 10 | 11-10-2021 to 16-10-2021 | Resolving Power of a diffraction grating, its use as a spectroscopic element |
| Week 11 | 18-10-2021 to 19-10-2021 | resolving power of microscope and telescope, prism |
| **Mid Semester Exam (21st October 2021 – 30th October 2021)** | | |
| Week 12 | 01-11-2021 to 06-11-2021 | Polarization: Concept and analytical treatment of unpolarized, plane polarized  and elliptically polarized light. |
| Week 13 | 08-11-2021 to 13-11-2021 | Malus Law, Brewsters Law |
| Week 14 | 15-11-2021 to 20-11-2021 | Polarization by Reflection, Scattering, Dichorism |
| Week 15 | 22-11-2021 to 27-11-2021 | Double refraction, Nicol prism, Sheet polarizers, retardation plates. |
| Week 16 | 29-11-2021 to 30-11-2021 | Production and analysis of polarized light (quarter and half wave plates) |