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

**Teaching Plan Session Odd Semester**

**(2018-19)**

**Class: B.Sc. 3rd semester Name of the Teacher: KAMLESH KUMARI**

**Subject:Physics Period : IVth**

**Paper : B Room No : 221**

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| **S. No** | **Date From** | | **Date Upto** | **Topics to be covered** |
| Week 1 | **(For ongoing classes)** | | | Concept of coherence, spatial and temporal coherence, coherence time, coherence length,  area of coherence. |
| July 24, 2018 | | July 28, 2018 |
| Week 2 | July 30, 2018 | August 4, 2018 | | Conditions for observing interference fringes. Interference by wavefront division and  amplitude division. Young’s double slit experiment. Lloyd’s mirror and Fresnel’s biprism ,phase change on reflection. |
| Week 3 | August 6, 2018 | August 11, 2018 | | Newton’s rings, Michelson interferometer—working, principle and  nature of fringes. |
| Week 4 | August 13, 2018 | August 18, 2018 | | Interference in thin films, Role of interference in anti-reflection . Multiple beam interference. |
| Week 5 | August 20, 2018 | August 25, 2018 | | Fabry-Perot interferometer, nature of fringes, finesse*.*  Numerical problems.  Class test. |
| Week 6 | August 27, 2018 | September 1, 2018 | | *Diffraction :* Huygens-Fresnel’s theory of Diffraction. Fresnel’s half period zones, zone plates. Distinction between Fresnel and  Fraunhofer diffraction.. |
| Week 7 | September 3, 2018 | September 8, 2018 | | Fraunhofer diffraction due to single slit and intensity distribution , double slits and multiple slits (qualitative). . |
| Week 8 | September 10, 2018 | September 15, 2018 | | Fraunhofer diffraction at rectangular (qualitative discussion) and circular apertures.  *Numerical problems and class test* |
| Week 9 | September 17, 2018 | September 22, 2018 | | Effects of diffraction in  optical imaging, resolving power of microscope and telescope, |
| Week 10 | September 24, 2018 | September 29, 2018 | | diffraction grating, its use as a spectroscopic  element, resolving power, Moire’s fringes. |
| Week 11 | October 1, 2018 | October 8, 2018 | | Numerical problems |
| **MID SEMESTER EXAMINATION (October 11, 2018 to October 17, 2018)** | | | | |
| Week 12 | October 20, 2018 | October 27, 2018 | | Discussion of Objective type questions and Class test. |
| Week 13 | October 29, 2018 | November 3, 2018 | | Polarization : Concept and analytical treatment of unpolarised , plane polarized  and elliptically polarized light. |
| Week 14 | November 5, 2018 | November 10, 2018 | | Double refraction, Nicol prism. |
| Week 15 | November 12, 2018 | November 17, 2018 | | sheet polarisers, retardation plates. |
| Week 16 | November 19, 2018 | November 22, 2018 | | Production and analysis of polarized light (quarter and half wave plates). |
| Week 17 | November 26, 2018 | December 1, 2018 | | Numerical problems and class test. |