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

**Teaching Plan Session Odd Semester**

**(2017-18)**

**Class: B.Sc III (Semester) Name of the Teacher:Neeru Sehgal**

**Subject: Physics Period :V**

**Paper : C Room No : 129**

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| **S. No** | **Date From** | **Date Upto** | | **Topics to be covered** |
| Week 1 | July 22 & July 24 2017 | July 29, 2017 | | Formalism of Wave Mechanics :  Plancks’s formula of Black body radiation and energy quantization, |
| Week 2 | July 31 2017 | Aug 5, 2017 | | Wave-particle duality – Photoelectric effect |
| Week 3 | Aug 7, 2017 | Aug 12, 2017 | | X-raydiffraction, Compton effect, Pair production, Photon and gravity. |
| Week 4 | Aug 14, 2017 | Aug 19, 2017 | | De Brogile waves, wave packet, Phase velocity and Group velocity, |
| Week 5 | Aug 21, 2017 | Aug 26, 2017 | | Electron microscope, Particle in a box, Particle diffraction, |
| Week 6 | Aug 28, 2017 | Sept 2, 2017 | | Davisson-Germer experiment, Interferferometry with particles. Uncertainty principle with illustrations, Principle of complementarity. |
| Week 7 | Sept 4, 2017 | Sept 9, 2017 | | Quantum mechanics, Wave equation, Plausible arguments leading to time-dependent Schrodinger equations, Born’s interpretation of Wave function, |
| Week 8 | Sept 11, 2017 | Sept 16, 2017 | | complex character, continuity and boundary  conditions, probability interpretation,normalizati  on, |
| Week 9 | Sept 18, 2017 | Sept 23, 2017 | | Probabilty current, Probability conservation  equation, Principle of superposition. |
| Week 10 | Sept 25, 2017 | Sept 29, 2017 | | Fundamental postulates of quantum mechanics.  Eigenvalues and eigenfunctions. Operator  formalism, Position, momentum and energy operators,expectation values |
| **Autumn Break (30 Sept 2017- 09 Oct 2017)**  **Mid Semester Exam (10 Oct 2017 – 17 Oct 2017)** | | | | |  |  | Limitation of MB statistics , BE distribution law , Planck’s law for energy distribution Wein displacement law ,wein’as law of energy distribution , rayleigh jeans law of energy distribution Stefan ‘s law , ,comparison between three statistics |
| Week 11 | Oct 18, 2017 | | Oct 21, 2017 | Ehrenfest theorem, Hermitian operators. |
| Week 12 | Oct 23, 2017 | | Oct 28, 2017 | Problems in One and Three Dimensions :  Steady-state Schrodinger equation, Appliction to stationary states for one dimension |
| Week 13 | Oct 30, 2017 | | Nov 4, 2017 | Potential step. potential barrier, Tunnel effect examples |
| Week 14 | Nov 6, 2017 | | Nov 11, 2017 | ScanningTunneling microscope, rectangular potential well, Linear harmonic oscillator. |
| Week 15 | Nov 13, 2017 | | Nov 18, 2017 | SchrÖdinger equation for spherically symmetric potential, spherical harmonics |
| Week 16 | Nov 20, 2017 | | Nov 25, 2017 | hydrogen atom energy levels and eigenfunctions, |
| Week 17 | Nov 27, 2017 | | Dec 1, 2017 | Principal, Orbital and Magnetic quantumnumbers, Electron probability density. |