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

**Teaching Plan Session Odd Semester**

**(2017-18)**

**Class: B.Sc 5th sem andB.Sc 1st sem Name of the Teacher : Dr. Harjeet Kaur Subject: Physics**

**Period : Third Period**

**Paper : C and B Room No : 33 (1-4) and 29 (5-6)**

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| **S. No** | **Date From** | **Date Upto** | | **Topics to be covered** | |
| Week 1 | July 22 & July 24 2017 | July 29, 2017 | | Rutherford Scattering, Constituents of nuclei, p-e theory, n-p theory, SHM, Definitions, SHM as Projection of circular motion | |
| Week 2 | July 31 2017 | Aug 5, 2017 | | Nuclear size, shapes, mass, density, charge, wave mec property, Characteristics of SHM, Graphical Rep., Differential equation of SHM | |
| Week 3 | Aug 7, 2017 | Aug 12, 2017 | | Angular momentum, magnetic moment, electric quad. moment, Energy of SHM, Diff equation of angular SHM, Compound Pendulum | |
| Week 4 | Aug 14, 2017 | Aug 19, 2017 | | Nuclear forces, mass defect, packing fraction, Diff Eq of Torsional Pend, Transverse vib on String, Elec Osc., Energy Of Elec Osc. | |
| Week 5 | Aug 21, 2017 | Aug 26, 2017 | | Binding Energy, Analogiies with drop of liquid, Nuclear fission, Liquid drop Model, Compostion of Two perp SHM, In ration 1:1 and 1:2 | |
| Week 6 | Aug 28, 2017 | Sept 2, 2017 | | LDM ctd., failures amd its success, Shell Model, Success and its failures, Damped Mec Osc and its eq, Log Dec, Relax time, Q factor | |
| Week 7 | Sept 4, 2017 | Sept 9, 2017 | | Natural radioactivity, Properties of alpha beta gamma, Difference between gamma and x rays, Fundamental laws, Law od decay, Decay constant, half life, Elec damped osc, Dead Beat galv. | |
| Week 8 | Sept 11, 2017 | Sept 16, 2017 | | Average life, Activity, Series, Laws of Successive disintegeration, Forced osc and its eq, Bahaviour of disp with freq | |
| Week 9 | Sept 18, 2017 | Sept 23, 2017 | | Velocity, Range of alpha particles, Geiger Nuttal Law, Tunnel Effect, Gammows Theory, Beta Decay, Vel and accel with frequency | |
| Week 10 | Sept 25, 2017 | Sept 29, 2017 | | Neutrino Postulate, Energy conservation, Internal Conservation, Elec osc and its behaviour | |
| **Autumn Break (30 Sept 2017- 09 Oct 2017)**  **Mid Semester Exam (10 Oct 2017 – 17 Oct 2017)** | | | | | |
| Week 11 | Oct 18, 2017 | | Oct 21, 2017 | | Types of Nuclear rxns, Kinematics of nuclear rxns, Power and Band Width |
| Week 12 | Oct 23, 2017 | | Oct 28, 2017 | | Nuclear crosssection, Compound nucleus, Artificial radioactivity, Radio isotopes, Q factor and band width and amplification factor |
| Week 13 | Oct 30, 2017 | | Nov 4, 2017 | | Carbon dating, Energy classification of neutrons, Coupled Osc, Normal coord, inphase out phase |
| Week 14 | Nov 6, 2017 | | Nov 11, 2017 | | Rutherford scatt, Coulomb scatt., Soln of Diff eq, Equation of normal modes |
| Week 15 | Nov 13, 2017 | | Nov 18, 2017 | | Nuclear Reactors, Degrees of freedom, Significance of normal modes |
| Week 16 | Nov 20, 2017 | | Nov 25, 2017 | | Nuclear Fusion, Inductive Coupling of Elec osc |
| Week 17 | Nov 27, 2017 | | Dec 1, 2017 | | Revision, Numerical problems. |