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

**Teaching Plan Even Semester**

**Session (2018-19)**

**Class: B.Sc.I&III Name of the Teacher: Suresh Kumar**

**Subject: Physics Period :3rd&1st**

**Paper : A&B Room No : 129**

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| **S. No** | **Dates** | **Topics to be covered** |
| Week 1 | 14 /01/2019 – 19/01/2019 | Rigid body motion; Rotational motion/Structure and working of JFET, characteristics, drain and transconductance curve |
| Week 2 | 21/01/2019 –  25/01/2019 | Principal moments and Axes, Euler’s equations/FET amplifier and its voltage gain, structure and working of MOSFET |
| Week 3 | 28/01/2019 –  2/02/2019 | Precession and elementary gyroscope/Feed back in amplifier, voltage gain of negative feedback amplifier |
| Week 4 | 4/02/2019 –  9/02/2019 | Galilean transformations and invariance, transformation equations for inertial frames inclined to each other/Advantages of negative voltage feedback, negative feedback current feedback circuit, emitter follower |
| Week 5 | 11/02/2019 –  16/02/2019 | Non Inertial frames, Fictitious force in a rotating frames of reference, Centrifugal and Coriolis forces due to rotation of earth/Theory of sinusoidal oscillations, loop gain and phase, lead-lag RC circuit |
| Week 6 | 18/02/2019 –  23/02/2019 | Foucault’s pendulum/Wien bridge oscillator, Barkhausen criterion of sustained oscillations |
| Week 7 | 25/02/2019 –  02/03/2019 | Concept of stationery universal frame of reference and ether/Positive feedback amplifier LC and Colpitts oscillators |
| Mid Semester Exam | | |
| Week 8 | 11/03/2019 –  16/03/2019 | Michelson-Morley experiment and its result/Hartley oscillator |
| Week 9 | 18 /03/2019 –  22/03/2019 | Postulate of special theory of relativity, Lorentz transformations/OPAMP: characteristics of ideal and practical OPAMP 741, open-loop and close-loop gain, characteristics and applications-inverting and non-inverting amplifier, adder, subtractor |
| Week 10 | 25/03/2019 –  30/03/2019 | Kinematical consequences of Lorentz transformations-length contraction and time dilation, Twin paradox/Differentiator and integrator, comparator, timerIC555, pin diagram and its application as astable and monostable multivibrator |
| Week 11 | 1/04/2019 –  6/04/2019 | Transformation of velocities, simultaneity of relativity, velocity of light in moving fluid/Analog and digital circuits, binary numbers, decimal to binary conversions, AND, OR, NOT gate, NAND , NOR gates as universal gates, XOR and XNOR gates |
| Week 12 | 8/04/2019 –  12/04/2019 | Relativistic Doppler effect/DE Morgan’s theorem, simplification of logic circuits using Boolean algebra, Minterms and Maxterms, conversion of a truth table into an equivalent logic circuit by sum of products method. |
| Week 13 | 15/04/2019 –  20/04/2019 | Variation of mass with velocity, mass-energy equivalence, rest mass in an inelastic collision/Analog and digital communication systems, Amplitude and Frequency modulation, power in AM wave |
| Week 14 | 22/04/2019 –  27/04/2019 | Relativistic momentum and energy, their transformation/Generation and detection |
| Week 15 | 29 /04/2019 –  3/05/2019 | Concept of Minkowski space, four vector formation/Brief account of Satellite communication, Sky-wave communication ,Mobile communication |