**Post Graduate Govt. College for Girls, Sector-42, Chandigarh**

**Teaching Plan (Even Semester) Session (2019-2020)**

**Class: B.Sc.2nd /6th (Semester)**   **Name of the Teacher: Suresh Kumar**

**Subject:Physics Period:5th/2nd ,6th**

**Paper: A/B Room No:126**

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| **S. No** | **Dates** | **Topics to be Covered** |
| Week 1 | 09-01-2020 to 11-01-2020 | Rigid body motion; Rotational motion/Structure and working of JFET, characteristics, drain and transconductance curve |
| Week 2 | 13-01-2020 to 18-01-2020 | Principal moments and Axes, Euler’s equations/FET amplifier and its voltage gain, structure and working of MOSFET |
| Week 3 | 20-01-2020 to 25-01-2020 | Precession and elementary gyroscope/Feed back in amplifier, voltage gain of negative feedback amplifier |
| Week 4 | 27-01-2020 to 01-02-2020 | 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 | 03-02-2020 to 08-02-2020 | Non Inertial frames, Fictitious force in a rotating frames of reference, /Theory of sinusoidal oscillations, loop gain and phase, lead-lag RC circuit |
| Week 6 | 10-02-2020 to 15-02-2020 | Centrifugal and Coriolis forces due to rotation of earth /Wien bridge oscillator, Barkhausen criterion of sustained oscillations |
| Week 7 | 17-02-2020 to 22-02-2020 | Foucault’s pendulum /Positive feedback amplifier LC |
| Week 8 | 24-02-2020 to 29-02-2020 | Concept of stationery universal frame of reference and ether /Colpitts oscillators |
| Week 9 | 02-03-2020 to 05-03-2020 | Michelson-Morley experiment and its result /Hartley oscillator |
| Mid Semester Exams (06-03-2020 to 13-03-2020) | | |
| Week 11 | 14-03-2020, 16-03-2020 to 21-03-2020 | Postulate of special theory of relativity /OPAMP |
| Week 12 | 24-03-2020 to 28-03-2020 | 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 13 | 30-03-2020 to 04-04-2020 | 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 14 | 07-04-2020 to 11-04-2020 | 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 15 | 15-04-2020 to 18-04-2020 | 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 16 | 20-04-2020 to 24-04-2020 | 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 17 | 27-04-2020 to 02-05-2020 | Relativistic momentum and energy, their transformation/Generation and detection |
| Week 18 | 04-05-2020 | Concept of Minkowski space, four vector formation/Brief account of Satellite communication, Sky-wave communication ,Mobile communication |