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| Day | Lecture | **Practical** |
|  | Topic | **Topic** |
| 1. | Introduction about physics Physical quantities Units - fundamental and derived units | Familiarization of measurement instruments and their parts, and taking a reading. |
| 2. | Physical quantities Units - fundamental and derived units FPS, CGS and SI units |
| 3. | Dimensions and dimensional formulae of physical quantities | To find the diameter of solid cylinder using vernier calliper |
| 4. | Dimensional formulae Distance, area, volume, velocity, acceleration, momentum, force etc. |
| 5. | Dim. Formula of work, power, energy, surface tension, stress, strain, moment of inertia | Revision & Checked practical note book |
| 6. | Principle of homogeneity of dimensions conversion from one system of units to other |
| 7. | Limitations of dimensional analysis | To find internal diameter and depth of a beaker using vernier caliper and hence find its volume. |
| 8. | Scalar and vector quantities – examples |
| 9. | Addition of Vectors, | To find internal diameter and depth of a beaker using vernier caliper and hence find its volume. |
| 10. | Triangle and Parallelogram law |
| 11. | Vector Product, |
| 12. | Definition of Distance ,Displacement, Speed, Velocity, Acceleration, Force |
| 13. | Newton’s laws of motion and Conservation of linear momentum | Revision & Checked practical note book |
| 14. | Force, Resolution of force |
| 15. | Impulse and its examples | To find the diameter of wire using screw gauge. |
| 16. | Introduction to Circular motion |
| 17. | Angular displacement, angular velocity, angular Acceleration |
| 18. | Relation between linear and angular velocity. |

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| 19. | Centripetal and centrifugal forces |  |
| 20. | Banking of roads (application of centrifugal force) | Revision & Checked practical note book |
| 21. | Rotational motion with examples | To find the diameter of wire using screw gauge.  . |
| 22. | Definition of torque and angular momentum and their example |
| 23. | Moment of inertia and its physical significance | To find the thickness of paper sheet using screw gauge. |
| 24. | Work, its units and types with examples Transformation of energy |
| 25. | Energy and its units: Kinetic energy and potential energy | Revision & Checked practical note book |
| 26. | Energy conservation law in case of freely falling body | To determine the thickness of glass strip using a spherometer |
| 27. | Power (definition, formula and units),. |
| 28. | Simple numerical problem on power Energy and its units |
| 29. | Kinetic energy and potential energy | Revision & Checking of practical note books |
| 30. | Energy conservation law in case of freely falling body |
| 31. | Power (definition, formula and units),. | To determine the thickness of glass strip using a spherometer |
| 32. | Definition of deforming force restoring force, elastic body & plastic body |  |
| 33. | Stress and strain and their types | To determine radius of curvature of a given  spherical surface by a spherometer |
| 34. | Hooke’s law, |

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| 35. | Different types of module of elasticity Pressure, Pascal’s law | Revision & Checking of practical note books |
| 36. | Surface tension: definition, its units, surface tension |
| 37. | Effect of  temperature on Surface tension |
| 38. | Viscosity: definition, units and effect of temp. |
| 39. | Fluid motion, stream line and turbulent flow. |
| 40. | Definition of heat and temperature, | To verify parallelogram law of forces |
| 41. | Difference between heat and temperature |  |
| 42. | Principles of measurement of temperature, | To determine the atmospheric pressure at the  place by using Fortin’s Barometer |
| 43. | Different scales of temperature |
| 44. | Relationship between different temperature scales | To find force constant of spring using Hook’s Law |
| 45. | Modes of transfer of heat Conduction |
| 46. | convection and radiation |
| 47. | Properties of heat radiation | To measure room temperature using thermometer and  converting it into different temperature scale. |
| 48. | Principle and working of mercury thermometer |  |