**19SH11P2-APPLIED PHYSICS LABORATORY**

(Common to EEE, ECE, CSE & IT)

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| **Course Category:** | Basic Science | **Credits:** | 1.5 |
| **Course Type:** | Practical | **Lecture-Tutorial-Practical:** | 0-0-3 |
| **Prerequisite:** | Engineering Physics | **Sessional Evaluation:**  **External Exam Evaluation:**  **Total Marks:** | 40  60  100 |

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| **Course**  **Objectives** | Students undergoing this course are expected to understand: | |
| 1. To provide student to learn about some important experimental techniques in physics with knowledge in theoretical aspects so that they can excel in that particular field. | |
| **Course Outcomes** | Upon successful completion of the course , the students will be able to: | |
| CO1 | These experiments in the laboratory are helpful in understanding important concepts of physics through involvement in the experiments by applying theoretical knowledge. |
| CO2 | It helps to recognize where the ideas of the students agree with those accepted by physics and where they do not. |
| **Course**  **Content** | **LIST OF EXPERIMENTS**  1. Determination of rigidity modulus of wire material – Torsional pendulum.  2. Melde’s experiment – Transverse & longitudinal modes.  3. Resonance in LCR circuit.  4. Magnetic field along the axis of a coil (Stewart – Gee’s Method).  5. Study of characteristics of LED  6. Newton rings  7. Wedge method  8. Diffraction grating - Wavelength of given source.  9. Dispersive power of prism material using spectrometer.  10. P-N- junction diode characteristics.  11. Evaluation of Numerical Aperture of given optical fiber.  12. Energy gap of a P-N junction diode material.  13. Transistor characteristics.  14. Solar cell characteristics.  15. Logic gates. | |

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| Contribution of Course Outcomes towards achievement of Program Outcomes (3-High, 2-Medium, 1-Low) | | | | | | | | | | | | | | |
|  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
| CO1 | 3 | 3 | 2 | - | 3 | 3 | - | - | - | - | 3 | 3 | - | - |
| CO2 | 3 | 3 | 2 | - | 3 | 3 | - | - | - | - | 3 | 3 | - | - |
| CO3 | 3 | 3 | 3 | - | 3 | 3 | - | - | - | - | 3 | 2 | - | - |
| CO4 | 3 | 3 | 2 | - | 3 | 3 | - | - | - | - | 3 | 3 | - | - |
| CO5 | 3 | 3 | 2 | - | 3 | 3 | - | - | - | - | 2 | 2 | - | - |
| CO6 | 3 | 3 | 2 | - | 2 | 3 | - | - | - | - | 2 | 3 | - | - |