**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:** | 4060100 |

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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.
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| **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 LED6. 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 | - | - |