

| 21PCM106P       |   |   |   |            | Engineering Physics Practical |    |    |           |         |             |
|-----------------|---|---|---|------------|-------------------------------|----|----|-----------|---------|-------------|
| Teaching Scheme |   |   |   |            | Examination Scheme            |    |    |           |         |             |
| L               | T | P | C | Hours/Week | Theory                        |    |    | Practical |         | Total Marks |
|                 |   |   |   |            | MS                            | ES | IA | LW        | LE/Viva |             |
| 0               | 0 | 2 | 1 | 2          | --                            | -- | -- | 50        | 50      | 100         |

### COURSE OBJECTIVES

- Demonstrate the unique characteristics of waves
- Enhance knowledge of graduates on application of physics on petrochemical engineering
- Imbibe skills to develop minor devices for study purpose
- Enhance the skill to develop laser hologram

### List of Experiments

1. Introduction to Oscilloscope.
2. Study of Interference using Newton's Ring experiment.
3. Determination of thermal conductivity of different solids.
4. Experiment with solar collector.
5. Experimental to determine linear thermal expansion coefficient of solid bodies.
6. Experiment on reflection of Ultrasonic waves.
7. Experiments with heat pump.
8. Determining Planck's constant and inverse square law.
9. Experiments on diffraction with He-Ne Laser Kit.
10. Study of Hall Effect.
11. Determining semiconductor energy band gap using four probe method.
12. Experiment to study forced oscillations.
13. Study of charging and discharging of capacitive plates.
14. Study of Bio-Savart's Law
15. Experiments on Fiber Optics.
16. Study of Photoconductivity.
17. Determining e/m by Thomson's method.
18. Study of Polarization of light using LASER.
19. Millikan's oil drop experiment.
20. Study of Holography.

\*\* Any 10 experiments will be conducted relevant to theory course.

**Max. 28 Hrs.**

### COURSE OUTCOMES

On completion of the course, student will be able to

CO1: Analysis the engineering problems and design the components for the solution

CO2: Developing skills to utilize the different tools for engineering problems

CO3: Analyse the results and correlate with theory and its application in industries

CO4: Design the set-up and utilize for component analysis

CO5: Identifying the problem and creating the solutions for research and development

CO6: Analyse the scientific data and learn to be efficient as individual and a team member

### TEXT/REFERENCE BOOKS

### END SEMESTER EXAMINATION QUESTION PAPER PATTERN

**Max. Marks: 100**

Part A: Lab Work - Continuous Assessment

Part B: Lab Exam and Viva

**Exam Duration: 3 Hrs.**

50 marks

50 Marks