

**HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN**

**B. Sc. PHYSICS - SEMESTER – I (PRACTICAL COURSE)**

PROGRAMME CODE: SCIUG101

(Effective from June 2023 Under NEP – 2020)

| TYPE OF COURSE                        | CREDIT | COURSE CODE        |
|---------------------------------------|--------|--------------------|
| Minor Discipline Core Course (MIDSCP) | 2      | SC23MIDSC P PHY102 |

Teaching Hours per Week: 04 Hours for 2 Credit practical and Teaching Hours per Semester: 60 Hours

**Minor Discipline Core Course (MIDSCP) Practical**

1. Melde's Experiment: (i) To prove P/L constant and (ii) P<sup>2</sup>T constant
2. Study of Resonator: Verification of relation  $n^2 (V + kv) = \text{constant}$  and determine the frequency of unknown for k.
3. Determination of angular acceleration ( $\alpha$ ) and find MI of a Fly wheel using plot  $\alpha$  verses Torque.
4. Least square Method
5. Arrangement of Spectrometer for parallel rays using Schuster method
6. Study of the Series Resonance with Frequency Variation, Fix Capacitor.
7. Determination of the capacitance 'C' of a condenser.
8. Study of Maximum Power transfer Theorem
9. Study of Step Up Transformer: To determine Turn Ratio, % of Efficiency, energy loss due to copper loss for a given transformer.
10. P-N Junction diode as Half Wave Rectifier Without filter. Calculation of Percentage of Regulation.
11. Verification of Thevenin's Theorem.
12. Calibration of the Spectrometer and determines the wavelength of unknown line of Hg-spectrum.