

## LESSON PLAN

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| Discipline :<br><b>CIVIL ENGG.</b>      | Semester :<br><b>1<sup>ST</sup></b>            | Name of the Teaching Faculty:<br><b>SOVAKARA SING &amp; ANJALI KUJUR</b> |
| Subject: <b>ENGG. PHYSICS PRACTICAL</b> | No. of days/per week class allotted: <b>04</b> | Semester from date 16.08.2023 to 11.12.2023<br>No. of Weeks: 15          |

| Week | Class day | Theory/ Practical Topics  |
|------|-----------|---|
| 1st  | 1st       | Introduction about Vernier Calipers   |
|      | 2nd       | Discussion and practice to find volume of a solid cylinder by using a Vernier Calipers.             |
|      | 3rd       | To find volume of a solid cylinder by using a Vernier Calipers.                                     |
|      | 4th       | To find volume of a solid cylinder by using a Vernier Calipers.                                     |
| 2nd  | 1st       | Submission of record and Viva for the volume of a solid cylinder by using a Vernier Calipers.       |
|      | 2nd       | Discussion and practice to find volume of a hollow cylinder by using a Vernier Calipers.            |
|      | 3rd       | To find volume of a hollow cylinder by using a Vernier Calipers.                                    |
|      | 4th       | To find volume of a hollow cylinder by using a Vernier Calipers.                                    |
| 3rd  | 1st       | Submission of record and Viva for the volume of a hollow cylinder by using a Vernier Calipers.      |
|      | 2nd       | Introduction about screw gauge.   |
|      | 3rd       | Discussion and practice to find the cross sectional area of a wire by using a screw gauge.          |
|      | 4th       | To find the cross sectional area of a wire by using a screw gauge.                                  |
| 4th  | 1st       | To find the cross sectional area of a wire by using a screw gauge.                                  |
|      | 2nd       | Submission of record and Viva for the cross sectional area of a wire by using a screw gauge.        |
|      | 3rd       | Discussion and practice to find the thickness and volume of a glass piece using a screw gauge.      |
|      | 4th       | To find the thickness and volume of a glass piece using a screw gauge.                              |
| 5th  | 1st       | To find the thickness and volume of a glass piece using a screw gauge.                              |
|      | 2nd       | Submission of record and Viva for the thickness and volume of a glass piece using a screw gauge.    |
|      | 3rd       | Introduction about Spherometer  |
|      | 4th       | Discussion and practice to determine the radius of curvature of convex surface using a Spherometer. |

| Week | Class day | Theory/ Practical Topics   |
|------|-----------|--|
| 6th  | 1st       | To determine the radius of curvature of convex surface using a Spherometer.  |
|      | 2nd       | To determine the radius of curvature of convex surface using a Spherometer.  |
|      | 3rd       | Submission of record and Viva for the radius of curvature of convex surface using a Spherometer.   |
|      | 4th       | Discussion and practice to determine the radius of curvature of concave surface using a Spherometer.   |
| 7th  | 1st       | To determine the radius of curvature of concave surface using a Spherometer.   |
|      | 2nd       | To determine the radius of curvature of concave surface using a Spherometer.   |
|      | 3rd       | Submission of record and Viva for the radius of curvature of concave surface using a Spherometer.  |
|      | 4th       | Discussion and practice to determine the angle of Prism.   |
| 8th  | 1st       | To determine the angle of Prism.   |
|      | 2nd       | To determine the angle of Prism.   |
|      | 3rd       | To determine the angle of Prism.   |
|      | 4th       | Submission of record and Viva for the angle of Prism.  |
| 9th  | 1st       | Discussion and practice to determine the angle of Minimum Deviation by I ~ D curve method.   |
|      | 2nd       | To determine the angle of Minimum Deviation by I ~ D curve method.   |
|      | 3rd       | To determine the angle of Minimum Deviation by I ~ D curve method.   |
|      | 4th       | To determine the angle of Minimum Deviation by I ~ D curve method.   |
| 10th | 1st       | Submission of record and Viva for the angle of Minimum Deviation by I ~ D curve method.  |
|      | 2nd       | Discussion and practice to trace lines of force due to a bar magnet with North pole pointing North and locate the neutral points.            |
|      | 3rd       | To trace lines of force due to a bar magnet with North pole pointing North and locate the neutral points.                                    |
|      | 4th       | To trace lines of force due to a bar magnet with North pole pointing North and locate the neutral points.                                    |
| 11th | 1st       | To trace lines of force due to a bar magnet with North pole pointing North and locate the neutral points.                                    |
|      | 2nd       | To trace lines of force due to a bar magnet with North pole pointing North and locate the neutral points.                                    |
|      | 3rd       | Submission of record and Viva for the trace lines of force due to a bar magnet with North pole pointing North and locate the neutral points. |
|      | 4th       | Discussion and practice to trace lines of force due to a bar magnet with North pole pointing South and locate the neutral points.            |

| Week | Class day | Theory/ Practical Topics   |
|------|-----------|--|
| 12th | 1st       | To trace lines of force due to a bar magnet with North pole pointing South and locate the neutral points.                                    |
|      | 2nd       | To trace lines of force due to a bar magnet with North pole pointing South and locate the neutral points.                                    |
|      | 3rd       | To trace lines of force due to a bar magnet with North pole pointing South and locate the neutral points.                                    |
|      | 4th       | To trace lines of force due to a bar magnet with North pole pointing South and locate the neutral points.                                    |
| 13th | 1st       | Submission of record and Viva for the trace lines of force due to a bar magnet with North pole pointing South and locate the neutral points. |
|      | 2nd       | Discussion and practice to find the time period of a simple pendulum and determine acceleration due to gravity.                              |
|      | 3rd       | To find the time period of a simple pendulum and determine acceleration due to gravity.  |
|      | 4th       | To find the time period of a simple pendulum and determine acceleration due to gravity.  |
| 14th | 1st       | To find the time period of a simple pendulum and determine acceleration due to gravity.  |
|      | 2nd       | To find the time period of a simple pendulum and determine acceleration due to gravity.  |
|      | 3rd       | Submission of record and Viva for the time period of a simple pendulum and determine acceleration due to gravity.                            |
|      | 4th       | Discussion and practice to verify Ohm's Law by Ammeter – Voltmeter method  |
| 15th | 1st       | To verify Ohm's Law by Ammeter – Voltmeter method  |
|      | 2nd       | To verify Ohm's Law by Ammeter – Voltmeter method  |
|      | 3rd       | To verify Ohm's Law by Ammeter – Voltmeter method  |
|      | 4th       | Submission of record and Viva for the Ohm's Law by Ammeter – Voltmeter method  |

1. Text Book of Physics for Class XI (Part-I, Part-II) N.C.E.R.T
2. Text Book of Physics for Class XII (Part-I, Part-II) N.C.E.R.T
3. Text Book of Engineering Physics by Barik, Das, Sharma, Kalyani Publisher
4. Concepts in Physics by H. C. Verma, Vol. I & II, Bharti Bhawan Ltd. New Delhi