LESSON PLAN

SUBJECT: APPLIED PHYSICS-II LAB

BRANCH: COMMON (MECHANICAL & TEXTILE)

SEMESTER: 2ND (2024-25)

NAME OF THE FACULTY: ASEEMA BARIK

GOVERNMENT POLYTECHNIC, BHADRAK

HOD, Math& Sc

H.O.D. Math & Sc (I/c)

Academic Coordinator

Principal
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LESSON PLAN FOR WINTER SEMESTER – 2025

Dept. of Math & Science, Govt. Polytechnic, Bhadrak

Name of the Faculty : Aseema Barik
Course Code: Pr-2
Theory: Applied Physics-II Lab
Total Periods : 30
Examination: Summer(2025)
Sem: 2ND

Sessional: 25
End Sem. Exam: 25
Total Mark : 50
Class Start : 04.02.2025

Discipline: Math & Science	**Semester: 2ND (2025)**	**Name of the Teaching Faculty : Aseema Barik**
Subject: Applied Physics-II Lab	**No. of Days/per week class allotted: 1 day/ 2 classes**	**Semester from date: 04.02.2025 To Date: 17.05.2025** **No. of Weeks: 15**
Week	**Class Day**	**Practical/ Topics**
1st	1ST	▪ Importance of experimentation and accurate measurement ▪ Instruction of maintaining lab record ▪ Introduction about some instruments
	2ND	▪ Demonstration to determine and verify the time period of a cantilever
2nd	1ST	▪ Demonstration to determine velocity of ultrasonic in different liquids using ultrasonic interferometer
	2ND	▪ Demonstration to verify laws of reflection
3rd	1ST	▪ Demonstration to verify laws of refraction
	2ND	▪ Demonstration to determine the focal length and magnifying power of convex lens

4th	1ST	▪ Demonstration to verify ohm's law
	2ND	▪ Demonstration to verify laws of resistances in series and parallel combination
5th	1ST	▪ Demonstration to find the frequency of AC main using electrical vibrator
	2ND	▪ Demonstration to verify Kirchoff's law using electrical circuits
6th	1ST	▪ Demonstration to find the resistance of a galvanometer by half deflection method
	2ND	▪ Demonstration to convert galvanometer into an ammeter and voltmeter
7th	1ST	▪ Demonstration to draw V-I characteristics of semiconductor diode(Ge,Si) and determine its knee voltage
	2ND	▪ Demonstration to study the dependence of capacitance of a parallel plate capacitor on various factors and determine permittivity of air at a place
8th	1ST	▪ Lab practice by the students of group ✓ Alpha – Determine and verify the time period of a cantilever ✓ Beta – Verify laws of reflection ✓ Gamma – Verify laws of refraction
	2ND	▪ Lab practice by the students of group ✓ Alpha – Verify laws of reflection ✓ Beta – Verify laws of refraction ✓ Gamma – Determine and verify the time period of a cantilever
9th	1ST	▪ Lab practice by the students of group ✓ Alpha – Verify laws of refraction ✓ Beta – Determine and verify the time period of a cantilever ✓ Gamma – Verify laws of reflection

	2ND	▪ Lab practice by the students of group ✓ Alpha – Determine velocity of ultrasonic in different liquids using ultrasonic interferometer ✓ Beta – Determine the focal length and magnifying power of convex lens ✓ Gamma – Verify ohm's law
10th	1ST	▪ Lab practice by the students of group ✓ Alpha – Determine the focal length and magnifying power of convex lens ✓ Beta – Verify ohm's law ✓ Gamma – Determine velocity of ultrasonic in different liquids using ultrasonic interferometer
	2ND	▪ Lab practice by the students of group ✓ Alpha – Verify ohm's law ✓ Beta – Determine velocity of ultrasonic in different liquids using ultrasonic interferometer ✓ Gamma – Determine the focal length and magnifying power of convex lens
11th	1ST	▪ Lab practice by the students of group ✓ Alpha – Verify laws of resistances in series and parallel combination ✓ Beta – Verify Kirchoff's law using electrical circuits ✓ Gamma – Find the resistance of a galvanometer by half deflection method
	2ND	▪ Lab practice by the students of group ✓ Alpha – Verify Kirchoff's law using electrical circuits ✓ Beta – Find the resistance of a galvanometer by half deflection method ✓ Gamma - Verify laws of resistances in series and parallel combination
12th	1ST	▪ Lab practice by the students of group ✓ Alpha- Find the resistance of a galvanometer by half deflection method ✓ Beta- Verify laws of resistances in series and parallel combination ✓ Gamma- Verify Kirchoff's law using electrical circuits
	2ND	▪ Re-practice on the basis of necessity ▪ Record correction

13th	1ST	▪ Lab practice by the students of group ✓ Alpha – Find the frequency of AC main using electrical vibrator ✓ Beta – Convert galvanometer into an ammeter and voltmeter ✓ Gamma – Draw V-I characteristics of semiconductor diode(Ge,Si) and determine its knee voltage
	2ND	▪ Lab practice by the students of group ✓ Alpha – Convert galvanometer into an ammeter and voltmeter ✓ Beta – Draw V-I characteristics of semiconductor diode(Ge,Si) and determine its knee voltage ✓ Gamma – Find the frequency of AC main using electrical vibrator
14th	1ST	▪ Lab practice by the students of group ✓ Alpha – Draw V-I characteristics of semiconductor diode(Ge,Si) and determine its knee voltage ✓ Beta – Find the frequency of AC main using electrical vibrator ✓ Gamma – Convert galvanometer into an ammeter and voltmeter
	2ND	▪ Lab practice by the students ▪ Record correction
15th	1ST	▪ Record checking and viva
	2ND	▪ Record checking and viva

A Barik
03.02.2025

Signature of the Faculty