

LABORATORY ASSIGNMENT /SHEET /JOB /PROJECT ACTIVITY PLANNING (LP)

Academic Year: 2025-26 (EVEN)

Date: 15/12/2025

Institute Name: PPCOE, Karjat

MSBTE Code: 61303

Program and Code: Electrical Engineering (EE)

Course Code & Abbr.: 312310(FEE)

Course Name: FUNDAMENTAL OF ELECTRICAL ENGINEERING (FEE)

Name of Faculty: Ms.Jadhav N.S.

Class: EE2K

Semester: 2nd

Scheme: K

Learning Hrs. 60

• Teaching-Learning & Assessment Scheme:

Course Code	Course Title	Abbr	Course Category	Learning Scheme						Credits	Paper Duration	Assessment Scheme										Total Marks
				Actual Contact Hrs/Week			SLH	NLH	Theory				Based on LL & TSL Practical				Based on SL					
									FA-TH			SA-TH	Total		FA-PR		SA-PR		SLA			
				C L	T L	L L			Max			Max	Max	Min	Max	Min	Max	Min	Max	Min		
312310	FUNDAMENTAL OF ELECTRICAL ENGINEERING	FEE	DSC	4	-	4	2	10	5	3	30	70	100	40	25	10	25#	10	25	10	175	

Abbreviations: CL- Class Room Learning, TL- Tutorial Learning, LL-Laboratory Learning, SLH-Self Learning Hours, NLH-Notional Learning Hours, FA - Formative Assessment, SA -Summative assessment, IKS – Indian Knowledge System, SLA - Self Learning Assessment
Legends: @ Internal Assessment, # External Assessment, *# On Line Examination, @\$ Internal Online Examination

• COURSE LEVEL LEARNING OUTCOMES (COS)

- CO1 - Determine various parameters used in electric circuit.
- CO2 - Use basic laws of electrical engineering in D.C. Circuits.
- CO3 - Use capacitor and battery in electrical circuits.
- CO4 - Use principles of magnetism in Magnetic Circuits.
- CO5 - Apply Laws of electromagnetism in electrical circuit and systems

• COs, Practical Laboratory Learning Outcome (LLOs) and Mapping:

Pr. No	COs	LLO	Name of Experiments / Assignment / Sheet / Job/ Project Activity	Planned Date A/B/C		Actual date of Performance	Remark
				From	To		
1	CO1	1.1	Preparation of Layout of Electrical Engineering Laboratory.	A- B- C-	A- B- C-	A- B- C-	
2	CO1	2.1	Operation of fire extinguisher and preparation of safety rules charts	A- B- C-	A- B- C-	A- B- C-	
3	CO1	3.1	Check lab supply system and make use of relevant electric tools for various applications.	A- B- C-	A- B- C-	A- B- C-	
4	CO1 CO2	4.1	Verification of Ohm's Law	A- B- C-	A- B- C-	A- B- C-	
5	CO1	5.1	Read analog meters for measurement of various electrical quantities in AC/DC circuits.	A- B- C-	A- B- C-	A- B- C-	

6	CO1 CO2	6.1	Use of Multimeter and Clip-On meter for the measurement of AC/DC Current, Voltage and Resistance in the given circuit	A- B- C-	A- B- C-	A- B- C-	
7	CO1 CO2	7.1	Measurement of frequency, Time period, Peak Value and Average Value of the given A.C. wave on CRO.	A- B- C-	A- B- C-	A- B- C-	
8	CO1	8.1	Verification of Kirchoff's Voltage Law	A- B- C-	A- B- C-	A- B- C-	
9	CO1 CO2	9.1	Verification of Kirchoff's Current Voltage Law	A- B- C-	A- B- C-	A- B- C-	
10	CO1 CO2	10.1	Use of rheostat as current regulator and potential divider	A- B- C-	A- B- C-	A- B- C-	
11	CO1 CO2	11.1	Determination of PD, EMF and internal resistance of DC source .	A- B- C-	A- B- C-	A- B- C-	
12	CO1 CO2	12.1	Verification of parameters of two/three resistances connected in series connection.	A- B- C-	A- B- C-	A- B- C-	
13	CO1 CO2	13.1	Verification of parameters of two/three resistances connected in parallel connection.	A- B- C-	A- B- C-	A- B- C-	
14	CO1 CO3	14.1	Plot the charging characteristics of capacitor and find the time constant (RC).	A- B- C-	A- B- C-	A- B- C-	
15	CO1 CO3	15.1	Plot the discharging characteristics of capacitor and find the time constant (RC).	A- B- C-	A- B- C-	A- B- C-	
16	CO1 CO3	16.1	Verification of the equivalent capacitance in series connected circuits	A- B- C-	A- B- C-	A- B- C-	
17	CO1 CO3	17.1	Verification of equivalent capacitance of the parallel connected circuits	A- B- C-	A- B- C-	A- B- C-	
18	CO1 CO4	18.1	Plot the Rise Characteristics of electric current in a circuit consisting of resistance and inductance in the circuit	A- B- C-	A- B- C-	A- B- C-	

19	CO1 CO4	19.1	Plot the decay characteristics of Electric current in a circuit consisting of resistance and inductance in the circuit.	A- B- C-	A- B- C-	A- B- C-	
20	CO4	20.1	Plot B-H curve for the given magnetic material.	A- B- C-	A- B- C-	A- B- C-	
21	CO4	21.1	Plot Magnetization curve for magnetic core	A- B- C-	A- B- C-	A- B- C-	
22	CO4	22.1	Study of Hysteresis loop for the given transformer coil	A- B- C-	A- B- C-	A- B- C-	
23	CO4 CO5	23.1	Verification of Faraday's law of electromagnetic induction(Statically Induced EMF)	A- B- C-	A- B- C-	A- B- C-	
24	CO4 CO5	24.1	Verification of Faraday's law of electromagnetic induction(Dynamically Induced EMF)	A- B- C-	A- B- C-	A- B- C-	
25	CO4 CO5	25.1	Verification of Fleming's Right Hand Rule	A- B- C-	A- B- C-	A- B- C-	
26	CO4 CO5	26.1	Verification of Fleming's Left Hand Rule	A- B- C-	A- B- C-	A- B- C-	
27	CO1 CO3	27.1	Plot the charging & discharging curves of battery	A- B- C-	A- B- C-	A- B- C-	

. ASSESSMENT METHODOLOGIES/TOOLS

- **Formative assessment (Assessment for Learning)**
 - Term Work
 - Assignment
- **Summative Assessment (Assessment of Learning)**
 - End Term Exam Theory
 - Micro-project
 - Tutorial Performance

(Name Signature of Faculty)

(Name & Signature of HOD)

