

# **COURSE FILE**

ON

# BASIC ELECTRICAL ENGINEERING LAB

**Course Code – EE202ES** 

I B. Tech Semester-II A.Y. 2022-2023

> Prepared by G.BHARGAVI Asst. Professor

Head of the Department Department of H&S SRI INDU INSTITUTE OF ENGG & TECH Periouda(M) Ibrahimoatnam (M) R.R. Dist-501 510

PRINCIPAL

Sri Indu Institute of Engineering & Tech Sheriguda(Vill), Ibrahimpatnam R.R. Dist. Telangana-501 510.

https://siiet.ac.in



# Sri Indu Institute of Engineering and Technology (Autonomous)

(Formerly RVR Institute of Engineering & Technology )

Surs

ESTD : 2007

EAMCET CODE: INDI

#### An Autonomous Institution Under UGC

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Approved by AICTE, New Delhi, & Affiliated to JNTUH, Hyderabad.

**JNTUH CODE: X3** 

Academic Year	2022-2023
Course Title	Basic Electrical Engineering Lab
Course Code	EE202ES
Programme	B.Tech
Year & Semester	I & II
Branch & Section	AI&DS
Regulation	BR22
Room No	D204 & A005
Name of the Lab Incharge	S.NISCHALA
Name of the Faculty Incharge	G.BHARGAVI

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# **INSTITUTE VISION & MISSION**

#### Vision:

To become a premier institute of academic excellence by providing the world class education that transforms individuals into high intellectuals, by evolving them as empathetic and responsible citizens through continuous improvement.

#### **Mission:**

- IM1: To offer outcome-based education and enhancement of technical and practical skills.
- IM2: To Continuous assess of teaching-learning process through institute-industry collaboration.
- IM3: To be a centre of excellence for innovative and emerging fields in technology development with state-of-art facilities to faculty and students' fraternity.
- IM4: To Create an enterprising environment to ensure culture, ethics and social responsibility among the stakeholders.

Head of the Department Department of H&S SRI INDU INSTITUTE OF ENGG & TECH beriouda[M] Ibrahimpatnam (M) R.R. Dist-501 516

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#### **PROGRAMME OUTCOMES**

**PO1: Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

**PO2: Problem Analysis:** Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO3: Design / Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

**PO4: Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

**PO5: Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

**PO6: The Engineer & Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

**PO7: Environment & Sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**PO9: Individual & Team Work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO10: Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, give and receive clear instructions.

**PO11: Project Management & Finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

**PO12: Life-Long Learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

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#### **B.Tech. in ARTIFICIAL INTELLIGENCE AND DATA SCIENCE**

#### COURSE STRUCTURE, I YEAR SYLLABUS (BR22 Regulations) Applicable from Academic Year: 2022-23 Batch

#### I Year I Semester

S. No.	Course Code	Course Title	L	Т	Р	Credits
1.	MA101BS	Matrices and Calculus	3	1	0	4
2.	AP102BS	Applied Physics	3	1	0	4
3.	CS103ES	Programming for Problem Solving	3	0	0	3
4.	ME102ES	Engineering Workshop	0	1	3	2.5
5.	EN104HS	English for Skill Enhancement	2	0	0	2
6.	CS106ES	Elements of Computer Science & Engineering	0	0	2	1
7.	AP105BS	Applied Physics Laboratory	0	0	3	1.5
8.	CS107ES	Programming for Problem Solving Laboratory	0	0	2	1
9.	EN107HS	English Language and Communication Skills Laboratory	0	0	2	1
10.	*MC101ES	Environmental Science	3	0	0	0
11.		Induction Programme				
		Total	14	3	12	20

#### I Year II Semester

S. No.	Course Code	Course Title	L	Т	Р	Credits
1.	MA201BS	Ordinary Differential Equations and Vector Calculus	3	1	0	4
2.	CH203BS	Engineering Chemistry	3	1	0	4
3.	ME201ES	Computer Aided Engineering Graphics		0	4	3
4.	EE201ES	Basic Electrical Engineering		0	0	2
5.	EC201ES	Electronic Devices and Circuits	2	0	0	2
6.	CH206BS	Engineering Chemistry Laboratory	0	0	2	1
7.	EE202ES	Basic Electrical Engineering Laboratory	0	0	2	1
8.	CS201ES	Python Programming Laboratory	0	1	2	2
9.	CS203ES	IT Workshop		0	2	1
		Total	11	3	12	20



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#### BASIC ELECTRICAL ENGINEERING LABORATORY (Course Code: EE202ES)

#### B.Tech. I Year II Sem.

L T P C 0 0 2 1

# Prerequisites: Basic Electrical Engineering

## **Course Objectives:**

- To measure the electrical parameters for different types of DC and AC circuits using conventional and theorems approach.
- To study the transient response of various R, L and C circuits using different excitations.
- To determine the performance of different types of DC, AC machines and Transformers.

## Course Outcomes: After learning the contents of this paper the student must be able to

- Verify the basic Electrical circuits through different experiments.
- Evaluate the performance calculations of Electrical Machines and Transformers through various testing methods.
- Analyze the transient responses of R, L and C circuits for different input conditions.

#### List of experiments/demonstrations:

#### PART- A (compulsory)

- 1. Verification of KVL and KCL
- 2. Verification of Thevenin's and Norton's theorem
- 3. Transient Response of Series RL and RC circuits for DC excitation
- 4. Resonance in series RLC circuit
- 5. Calculations and Verification of Impedance and Current of RL, RC and RLC series circuits
- 6. Measurement of Voltage, Current and Real Power in primary and Secondary Circuits of a Single-Phase Transformer
- 7. Performance Characteristics of a DC Shunt Motor
- 8. Torque-Speed Characteristics of a Three-phase Induction Motor.

## PART-B (any two experiments from the given list)

- 1. Verification of Superposition theorem.
- 2. Three Phase Transformer: Verification of Relationship between Voltages and Currents(Star-Delta, Delta-Delta, Delta-star, Star-Star)
- 3. Load Test on Single Phase Transformer (Calculate Efficiency and Regulation)
- 4. Measurement of Active and Reactive Power in a balanced Three-phase circuit
- 5. No-Load Characteristics of a Three-phase Alternator

## **TEXT BOOKS:**

- D.P. Kothari and I. J. Nagrath, "Basic Electrical Engineering", Tata McGraw Hill, 4<sup>th</sup> Edition, 2019.
- MS Naidu and S Kamakshaiah, "Basic Electrical Engineering", Tata McGraw Hill, 2<sup>nd</sup> Edition, 2008.



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# **COURSE OUTCOMES**

#### **Course Name: Basic Electrical Engineering Lab (C127)**

At the End of the course, student will be able to

CO No	DESCRIPTION
C127.1	Apply basic circuit laws and simplify the network using reduction techniques. (Application)
C127.2	Understand time domain analysis, resonance in RLC parameters and evaluate impedance in RLC circuit (Knowledge)
C127.3	Understand the working concept, Select range of apparatus based on the ratings of different machines like transformers and motors (Knowledge)
C127.4	Determine efficiency and regulation of transformers by various test (Evaluation)
C127.5	Determine the performance characteristics of dc shunt motor. (Evaluation)
C127.6	Determine 3 phase power, torque speed characteristics of 3 phase induction motor. (Evaluation)

Course Outcome	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
C127.1	3	3	2	1	-	-	-	-	2	1	-	2	-	-
C127.2	3	3	1	2	1	-	-	-	2	1	-	2	-	-
C127.3	3	-	-	-	1	-	-	-	2	-	-	3	-	-
C127.4	2	3	1	-	1	1	-	-	3	-	-	2	-	-
C127.5	2	3	1	-	1	1	-	-	3	-	-	2	-	-
C127.6	2	3	1	-	1	1	-	-	3	-	-	2	-	-
PO Avg	2.5	3	1.2	1.5	1	1	-	-	2.5	1	-	2.17	-	-

# COs and POs & PSOs Mapping

3-High 2-Medium 1-Low



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## LIST OF EXPERIMENTS AND THEIR CO, PO MAPPING

S.No	Name of The Experiment	CO	РО
1	Verification of KVL and KCL	1	1,2,3,4,9,10,12
2	Verification of Thevenin's and Norton's theorem	1	1,2,3,4,9,10,12
3	Transient Response of Series RL and RC circuits for DC excitation	2	1,2,3,4,5,9,10,12
4	Resonance in series RLC circuit	2	1,2,3,4,5,9,10,12
5	Calculations and Verification of Impedance and Current of RL, RC and RLC series circuits	2	1,2,3,4,5,9,10,12
6	Measurement of Voltage, Current and Real Power in primary and Secondary Circuits of a Single-Phase Transformer	3	1,5,9,12
7	Performance Characteristics of a DC Shunt Motor	5	1,2,3,5,6,9,12
8	Torque-Speed Characteristics of a Three-phase Induction Motor.	6	1,2,3,5,6,9,12
9	Verification of Superposition theorem	1	1,2,3,4,9,10,12
10	Load Test on Single Phase Transformer (Calculate Efficiency and Regulation)	4	1,2,3,5,6,9,12



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Class: Al	s: AI &DS <u>Semester</u> : II <u>W.</u>		E.F-03-04-2023		LH	:-D-2	10					
	I 9:40- 10:30	II 10:3	0 -	III 11:20- 12:10	12:1	10-	IV 12.45- 1.35	V 1.35- 2.25	V 2.2: 3.1	[ 5- 5	VII 3.15-4.00	
MON	CA	EG PR	ACT	TCE	14.	15	EC	BEE	ED	C	LIBRARY	
TUE	1	EC/BE	ELA	В			ODE	EC	BE	E	BEE(T)/EDC(T)	
WED		ITWS	LAE	3	N	T	ODE	EDC	BE	E	PYTHON(T)	
THU	ODE	EC	2	EDC	C H	: r	]	EC/BEE LA	B		ODE(T)/EC(T)	
FRI	BEE	OD	E	ODE			CA	EG PRACT	ICE		EDC(T)/ BEE(T)	
SAT	EDC	EC	2	BEE			Р	YTHON LA	B	-	EC(T)/ODE(T)	
Course Code	Course	Name	Na	me of the Fac	ulty	Cou	rse Code	Course Na	me		Name of the Faculty	
MA201BS	ODE-Or Different Equation Vector Calculus	dinary tial is &	V.S	UJATHA		СН	206BS	EC LAB- Engineering Chemistry Laboratory	;	K.MOUNIKA/V.MOUNIKA		
CH203BS	EC- Engineer Chemistr	ing ry	K.N	IOUNIKA		EE	202ES	BEE LAB- Basic Electr Engineering Laboratory	rical	G.BI R	HARGAVI/K.RAJASHEKA	
ME201ES	CAEG- Compute Aided Engineer Graphics	er ing	A.N	IALLESH		CS2	201ES	PYTHON Programmin Laboratory	ng	M.T	EJASWI/ P.BALU	
EE201ES	BEE-Bas Electrica Engineer	sic 1 ing	G.B	HARGAVI		CS2	203ES	ITWS-IT Workshop		N.KI CHA	EERTHI NDANA/B.SWATHI	
EC201ES	EDC- Electroni	ic &	P.SI	RILATHA			_					

Jeh

**Class In-Charge** 

Circuits

ch Time Table Coordinator SHERIGUD unstitu

Head of The Department Main Road, Sheriguda(V), Ibrahimpatnam(M), R.R. Dist. - 501 510



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#### Lab External Question paper

Year & Semester: I-II

Branch: AI&DS

**X**3

**BR22** 

Subject Name: Basic Electrical Engineering Lab

Faculty Name: G.BHARGAVI

#### S. No. QUESTIONS

- 1. Verification of KVL.
- 2. Verification of KCL.
- 3. Verification of Thevenins theorem.
- 4. Verification of Nortons theorem.
- 5. Transient Response of Series RL circuit using DC excitation.
- 6. Transient Response of Series RC circuit using DC excitation.
- 7. Resonance in series RLC circuit.
- 8. Calculations and Verification of Impedance and Current of RL, RC and RLC series circuits.
- 9. Verification of Superposition theorem.
- 10. Torque-Speed Characteristics of a Three-phase Induction Motor.
- 11. Performance Characteristics of a DC Shunt Motor.
- 12. Load Test on Single Phase Transformer (Calculate Efficiency and Regulation)



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#### **BEE Lab External Time Table Examination Branch**

A.Y.: 2022-23

**SEM-II** 

DATE	Day	Branch	Session	H T. No	Total No
	· ·				of
					Students
		AIML-B	FN	22X31A6651	47
21-8-2023	MONDAY			ТО	
				22X31A6697	
		AIML-A	FN	22X31A6601	50
22-8-2023	TUESDAY			ТО	
				22X31A6650	
		IOT	FN	22X31A6901	63
23-8-2023	WEDNESDAY			ТО	
				22X31A6963	
24-8-2023	THURSDAY	AI&DS	FN	22X31A7201	64
				ТО	
				22X31A7264	
		ECE	FN	22X31A0401	64
25-8-2023	FRIDAY			ТО	
				22X31A0464	

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# **BEE Lab External Time Table with examiners**

A.Y.: 2022-23

#### SEM-II

DATE	Day	Branch	Session	HT.No	Total No of Stude nts	Internal Examiner	External Examiner
21-8-2023	MONDAY	AIML-B	FN	22X31A6651 TO 22X31A6697	47	K.RAJASHEKAR	RAJESH BABU
22-8-2023	TUESDAY	AIML-A	FN	22X31A6601 TO 22X31A6650	50	K.RAJASHEKAR	BALU NAIK
23-8-2023	WEDNESDAY	ΙΟΤ	FN	22X31A6901 TO 22X31A6963	63	S.NISCHALA	RATNA KISHORI
24-8-2023	THURSDAY	AI&DS	FN	22X31A7201 TO 22X31A7264	64	G.BHARGAVI	G.GANESH WAR
25-3-2023	FRIDAY	ECE	FN	22X31A0401 TO 22X31A0464	64	M.P.REENA	LAXMI



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# LAB OCCUPANCY CHART

## **BASIC ELECTRICAL ENGINEERING LAB**

	I 9:40-10:30	II 10:30 -11:20	III 11:20-12:10	12:10- 12.45	IV 12.45-1.35	V 1.35-2.25	VI 2.25-3.15	VII 3.15- 4.00
MON	I B7	TECH II SEM AI&M	IL-A	_				
TUE	I B	TECH II SEM AI&I	<mark>DS</mark>		I B	AI&ML-B		
WED	]	BTECH IISEM EC	E	N N	I	BTECH II SEM	1 IOT	
THU		C	I B'	TECH II SEM A	AI&DS			
FRI	I BT	H	I	I ECE				
SAT	Ι	BTECH II SEM IO	Г		IE	TECH II SEM	AI&ML-B	

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# **BASIC ELECTRICAL ENGINEERING LAB**

### <u>Do's</u>

- 1. Pull the plug itself, not the cord attached to it
- 2. Disconnect any appliances that spark and have it repaired immediately
- 3. Always disconnect appliances before cleaning them
- 4. Turn of appliance when you leave home
- 5. Clean appliance and free of dust, lint grease,
- 6. Use moisture resistant cards when outside.
- 7. Wear rubber solid shoes when operating power tools
- 8. Follow manufacturer's instructions when operating electrical devices. All electrical devices should carry an underwriter's laboratory approval tag
- 9. Make sure outdoor electrical out lets are covered with weather proof covers
- 10. Use extension cards only for temporary applications
- 11. Use heavy duty cards when using power tools
- 12. Keep work areas clean and dry. Sparks can ignite wood scraps, saw dust and solvents
- 13. Make sure your power tools are grounded or certified double insulated.
- 14. When utilizing adapters, make sure to screw in the wire for grounding.

## <u>Don'ts</u>

- 1. Never turn on an appliance when standing or sitting in water. Shocks can be fatal.
- 2. Never overload a circuit by plugging into many appliances
- 3. Plug three way grounded plugs into appropriate outlets. Never tamper with the third prong
- 4. Never install cords under rugs where they will become warn by foot traffic



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#### **BASIC ELECTRICAL ENGINEERING LAB**

#### PHYSICAL LAB-1 FLOOR PLAN

#### ROOM NO: D-204



Lab Area (in sq.m) = 89.24

Lab In-Charge

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#### **BASIC ELECTRICAL ENGINEERING LAB**

#### PHYSICAL LAB-2 FLOOR PLAN

#### ROOM NO: A-005





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## Lab manual link

https://drive.google.com/file/d/1CezhXs40s30tKHGvSy8DOi0bg0xJMB-Z/view

Department of Humanities and Sciences



Branch & Section:

Lab Course Name:

#### Course Outcome Attainment (Internal Examination-1)

G.BHARGAVI	Academic Year:	2022-2023
AI&DS	Examination:	I Internal
Basic Electrical Engineering Lab	Year/semester	I/II

S.No	HT No.	R+O+A	V+V	E+E+R
Max. N	1arks ==>	10	10	10
1	22X31A7201	10	9	9
2	22X31A7202	9	8	6
3	22X31A7203	10	9	9
4	22X31A7204	10	8	7
5	22X31A7205	9	9	8
6	22X31A7206	10	8	7
7	22X31A7207	10	8	7
8	22X31A7208	10	9	10
9	22X31A7209	10	8	9
10	22X31A7210	9	9	9
11	22X31A7211	9	9	9
12	22X31A7212	10	8	6
13	22X31A7213	9	8	7
14	22X31A7214	9	6	7
15	22X31A7215	10	8	8
16	22X31A7216	9	6	6
17	22X31A7217	10	8	8
18	22X31A7218	9	7	6
19	22X31A7219	10	8	9
20	22X31A7220	8	8	7
21	22X31A7221	9	7	6
22	22X31A7222	10	8	8
23	22X31A7223	10	8	9
24	22X31A7224	9	7	7
25	22X31A7225	10	8	7
26	22X31A7226	10	9	10
27	22X31A7227	10	9	9
28	22X31A7228	9	8	6
29	22X31A7229	9	8	6
30	22X31A7230	9	5	6
31	22X31A7231	9	1	6
32	22X31A7232	9	7	6
33	22X31A7233	10	9	9
34	22X31A7234	9	5	6
35	22X31A7235	10	9	9
36	22X31A7236	10	9	8
37	22X31A7237	9	8	3
38	22X31A7238	9	8	5
39	22X31A7239	8	7	5

40	22X31A7240	8	6	4
41	22X31A7241	10	8	7
42	22X31A7242	10	9	9
43	22X31A7243	10	9	7
44	22X31A7244	10	8	8
45	22X31A7245	9	8	8
46	22X31A7246	9	6	5
47	22X31A7247	5	7	6
48	22X31A7248	10	10	8
49	22X31A7249	10	9	10
50	22X31A7250	9	8	7
51	22X31A7251	9	8	6
52	22X31A7252	9	8	8
53	22X31A7253	10	8	7
54	22X31A7254	10	9	8
55	22X31A7255	9	8	8
56	22X31A7256	9	9	6
57	22X31A7257	10	9	10
58	22X31A7258	7	8	5
59	22X31A7259	10	9	9
60	22X31A7260	10	9	8
61	22X31A7261	10	8	8
62	22X31A7262	10	8	8
63	22X31A7263	7	6	7
64	22X31A7264	7	6	7
65				
Target : HoD	set by the faculty /	6.00	6.00	6.00
Number	r of students			
perform	ned above the	63	62	58
target		00	02	20
Number attempt	r of students ed	64	64	64
Percent scored	age of students more than target	98%	97%	91%

#### CO Mapping with Exam Questions:

CO - 1	У	У	Y
CO - 2	у	у	Y
CO - 3	у	у	Y
CO - 4			
CO - 5			
CO - 6			

% Students Scored CO Attainment based 98% 97% 91%

tamment based o	n Exam Questions:		
CO - 1	98%	97%	91%
CO - 2	98%	97%	91%
CO - 3	98%	97%	91%
CO - 4			
CO - 5			
CO - 6			

СО	Intrnal practical	E+E+R	Overall	Level
CO-1	98%	91%	94%	3
CO-2	98%	91%	94%	3
CO-3	98%	91%	94%	3
CO-4				
CO-5				
CO-6				
Attainment (Int	ternal 1 Examina	ation) =		3

Attainment Lev			
1	40%		
2	50%		
3	60%		

Attainment (Internal 1 Examination) =

R+O+A: RECORD+OBSERVATION+ATTANDANCE V+V: VIVA VOICE E+E+R:EXPERIMENT WRITE UP+EXECUTION+RESULT

Department of Humanities and Sciences



#### Course Outcome Attainment (Internal Examination-2)

Name of the faculty :	G.BHARGAVI	Academic Year:	2022-2023
Branch & Section:	AI&DS	Examination:	II Internal
Lab Course Name:	Basic Electrical Engineering Lab	Year/semester	I/II

Max. Marks => 10 10 10 10   1 22X31A7201 10 9 10 10   2 22X31A7203 10 9 9 10   3 22X31A7203 10 9 9 10   4 22X31A7205 7 4 3 10   5 22X31A7206 9 5 8 10   6 22X31A7206 9 5 8 10   7 2X31A7208 10 9 10 10   9 22X31A7208 10 8 9 10   10 22X31A7210 10 8 9 10   11 22X31A7213 9 6 6 10   12 2X31A7214 6 4 2 10   15 2X31A7215 10 8 10 10   16 22X31A7216 7 4 3 10   17 2	S.No	HT No.	R+O+A	V+V	E+E+R	ppt
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Max. N	/larks ==>	10	10	10	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1	22X31A7201	10	9	10	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2	22X31A7202	6	5	1	10
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	3	22X31A7203	10	9	9	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	4	22X31A7204	10	8	8	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	5	22X31A7205	7	4	3	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	6	22X31A7206	9	5	8	10
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7	22X31A7207	7	4	1	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	8	22X31A7208	10	9	10	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	9	22X31A7209	10	8	9	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10	22X31A7210	10	8	9	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	11	22X31A7211	10	8	10	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	12	22X31A7212	7	7	4	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	13	22X31A7213	9	6	6	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	14	22X31A7214	6	4	2	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	15	22X31A7215	10	8	10	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	16	22X31A7216	7	4	3	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	17	22X31A7217	10	8	10	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	18	22X31A7218	7	8	7	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	19	22X31A7219	10	8	9	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	20	22X31A7220	10	5	9	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	21	22X31A7221	<i>//</i>	2	5	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	22	22X31A7222	10	8	8	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	23	22X31A7223	10	8	8	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	24	22X31A7224	10	5	2	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	25	22X31A7225	10	8	8	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	26	22X31A7226	10	10	10	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	27	22X31A7227	10	10	9	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	28	22X31A/228	0	0	0	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	29	22X31A/229	9	8	2	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	21	22X31A/230	6	4	2	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	22	22X31A/231	6	0	2	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	22	22A31A/232	10	8	10	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	24	22A3TA/233	6	6	10	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	34	22A31A7234	10	9	10	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	35	22X31A7235	10	7	9	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	37	22X31A7230	6	6	8	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	38	22X31A7238	10	5	9	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	39	22X31A7230	9	8	6	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	40	22X31A7240	7	0	5	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	41	22X31A7240	10	6	8	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	42	22X31A7242	10	7	9	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	43	22X31A7242	10	6	9	10
45 22X31A7245 10 6 9 10	44	22X31A7244	10	6	9	10
	45	22X31A7245	10	6	9	10

46	22X31A7246	7	8	7	10
47	22X31A7247	7	0	5	10
48	22X31A7248	8	8	10	10
49	22X31A7249	10	10	10	10
50	22X31A7250	10	5	9	10
51	22X31A7251	10	7	9	10
52	22X31A7252	10	7	9	10
53	22X31A7253	10	8	9	10
54	22X31A7254	10	6	9	10
55	22X31A7255	10	9	9	10
56	22X31A7256	10	6	7	10
57	22X31A7257	10	9	10	10
58	22X31A7258	7	8	5	10
59	22X31A7259	10	8	10	10
60	22X31A7260	10	9	10	10
61	22X31A7261	10	8	9	10
62	22X31A7262	10	7	9	10
63	22X31A7263	9	8	5	10
64	22X31A7264	7	0	5	10
65					
Target : / HoD	set by the faculty	6.00	6.00	6.00	6.00
Numbe perform	er of students	64	48	46	64
target		04			
Numbe attempt	er of students red	64	64	64	64
Percent scored	tage of students more than target	100%	75%	72%	100%

#### CO Mapping with Exam Questions:

CO - 1				
CO - 2				
CO - 3				
CO - 4	у	у	Y	у
CO - 5	V	v	Y	у
CO - 6	v	v	Y	v

% Students Scored	100%	75%	72%	100%
CO Attainment based of	n Exam Questions:			
CO - 1				
CO - 2				
CO - 3				
CO - 4	100%	75%	72%	100%
CO - 5	100%	75%	72%	100%
CO - 6	100%	75%	72%	100%

CO	Intrnal practical	E+E+R	ppt	Overall	Level
CO-1					
CO-2					
CO-3					
CO-4	88%	72%	100%	86%	3
CO-5	88%	72%	100%	86%	3
CO-6	88%	72%	100%	86%	3
Attainment (	Internal 2 Exami	nation) =	· · · · · · · · · · · · · · · · · · ·		3

Attain	Attainment Level								
1	40%								
2	50%								
3	60%								

Attainment (Internal 2 Examination) =

R+O+A : RECORD+OBSERVATION+ATTANDANCE V+V: VIVA VOICE

E+E+R:EXPERIMENT WRITE UP+EXECUTION+RESULT



#### Department of Humanities and Sciences Course Outcome Attainment (University Examinations)

Name of the faculty :		G.BHARGAVI		Academic	2022-2023		
Branch	& Section:	AI&DS		Year / Sem	ester:	I/II	
Lab Co	ourse Name:	Basic Electrical Engineering Lab					
S.No	Roll Number	Marks Secured		S.No	Roll Number	Marks Secured	
1	22X31A7201	58		35	22X31A7235	58	
2	22X31A7202	48		36	22X31A7236	56	
3	22X31A7203	58		37	22X31A7237	49	
4	22X31A7204	50		38	22X31A7238	47	
5	22X31A7205	50		39	22X31A7239	48	
6	22X31A7206	50		40	22X31A7240	32	
7	22X31A7207	42		41	22X31A7241	57	
8	22X31A7208	58		42	22X31A7242	58	
9	22X31A7209	52		43	22X31A7243	54	
10	22X31A7210	55		44	22X31A7244	49	
11	22X31A7211	53		45	22X31A7245	52	
12	22X31A7212	48		46	22X31A7246	45	
13	22X31A7213	43		47	22X31A7247	32	
14	22X31A7214	38		48	22X31A7248	57	
15	22X31A7215	54		49	22X31A7249	58	
16	22X31A7216	41		50	22X31A7250	49	
17	22X31A7217	54		51	22X31A7251	49	
18	22X31A7218	51		52	22X31A7252	50	
19	22X31A7219	55		53	22X31A7253	53	
20	22X31A7220	51		54	22X31A7254	49	
21	22X31A7221	35		55	22X31A7255	52	
22	22X31A7222	51		56	22X31A7256	48	
23	22X31A7223	54		57	22X31A7257	58	
24	22X31A7224	49		58	22X31A7258	38	
25	22X31A7225	53		59	22X31A7259	58	
26	22X31A7226	58		60	22X31A7260	57	
27	22X31A7227	58		61	22X31A7261	54	
28	22X31A7228	44		62	22X31A7262	50	
29	22X31A7229	51		63	22X31A7263	44	
30	22X31A7230	38		64	22X31A7264	35	
31	22X31A7231	38		65			
32	22X31A7232	38					
33	22X31A7233	53					
34	22X31A7234	38					
Class A	Class Average mark				Attainment Level	% students	
Number	of students perform	ned above the target	37		1	40%	
Number	of successful stude	nts	64		2	50%	
Percenta	age of students score	ed more than target	58%		3	60%	
Attainment level			3				



Department of Humanities and Sciences **Course Outcome Attainment** 

Name of the faculty : G.BHARGAVI Branch & Section: AI&DS Lab Course Name:

Academic Year: 2022-2023 Year / Semester: I/II

Basic Electrical Engineering Lab

Course Outcomes Internal Exam		2nd Internal Exam	Internal Exam	University Exam	Attainment Level
C01	3.00		3.00	3.00	3.00
CO2	3.00		3.00	3.00	3.00
CO3	3.00		3.00	3.00	3.00
CO4		3.00	3.00	3.00	3.00
CO5		3.00	3.00	3.00	3.00
CO6		3.00	3.00	3.00	3.00
Inter	ersity Attainment:	3.00	3.00		
		Weightage	40%	60%	
CO Attainment for the	ternal, University)	1.20	1.80	]	
CO Attainment for	the course (	Direct Method)		3.00	]

Overall course attainment level 3.00

Department of Humanities and Sciences <u>Program Outcome Attainment (from Course)</u>

Name of Faculty: Branch & Section: Course Name:

r: G.BHARGAVI Academic Year: 2022-2023 m: AI&DS Year / Semester: I/II Basic Electrical Engineering Lab

#### **CO-PO** mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	2	1	-	-	-	-	2	1	-	2	-	-
CO2	3	3	1	2	1	-	-	-	2	1	-	2	-	-
CO3	3	-	-	-	1	-	-	-	2	-	-	3	-	-
CO4	2	3	1	-	1	1	-	-	3	-	-	2	-	-
CO5	2	3	1	-	1	1	-	-	3	-	-	2	-	-
CO6	2	3	1	-	1	1	-	-	3	-	-	2	-	-
Course	2.50	3.00	1.20	1.50	1.00	1.00			2.50	1.00		2.17		

со	Cou	urse Outcome Attainment
		3.00
CO1		
		3.00
CO2		
		3.00
CO3		
		3.00
CO4		
		3.00
CO5		
CO6		3.00
Overall	3.00	

#### **PO-ATTAINMENT**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
со												
Attainme												
nt	2.50	3.00	1.20	1.50	1.00	1.00			2.50	1.00		2.17

CO contribution to PO - 33%, 67%, 100% (Level 1/2/3)