Sri Indu Institute of Engineering & Technology

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

COURSE FILE

ON

IC APPLICATIONS LAB

Course Code - EC407PC

II B.Tech II-SEMESTER

A.Y.: 2022-2023

Prepared by

Mrs. P. KAVITHA
Assistant Professor

Head of the Department
Electronics and Communication Engg. Dept
SRI INDU INSTITUTE OF ENGG & TECH
Sheriguda(V), Ibrahimpatnam(M), R.R.Dist-501 510

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

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Name of the Physical laboratory:	IC APPLICATIONS LAB
Course Code	EC407PC
Room No	B-306
Name of the Lab Incharge	Mrs. P. KAVITHA
Name of the Faculty Incharge	Mrs. P. KAVITHA

Index of Course File

INSTITUTE VISION AND 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.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

DEPARTMENT VISION AND MISSION

Vision:

To become a recognized center in the field of Electronics and Communication Engineering by producing creative engineers with social responsibility and address ever-changing global challenges.

Mission:

DM1: To facilitate an academic environment that enables student's centric learning.

DM2: To provide state-of-the-art hardware and software technologies to meet industry requirements.

DM3: To continuously update the Academic and Research infrastructure.

DM4: To Conduct Technical Development Programs for overall professional caliber of Stake Holders.

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PROGRAM EDUCATIONAL OBJECTIVES

Program Educational objectives are to Promote:

PEO1: Graduates with a strong foundation in Electronics and Communication Engineering, Science and Technology to become successful in the chosen professional career.

PEO2: Graduates with ability to execute innovative ideas for Research and Development with continuous learning.

PEO3: Graduates inculcated with industry based soft-skills to enable employability.

PEO4: Graduates demonstrate with ability to work in interdisciplinary teams and ethical professional behavior.

PROGRAM SPECIFIC OUTCOMES

PSO 1: Design Skills: Design, analysis and development a economical system in the area of Embedded system & VLSI design.

PSO 2: Software Usage: Ability to investigate and solve the engineering problems using MATLAB, Keil and Xilinx.

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PROGRAM OUTCOMES

1. **ENGINEERING KNOWLEDGE**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. **PROBLEM ANALYSIS**: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. **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.

4. **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.

5. **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.

6. **THE ENGINEER AND 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.

7. **ENVIRONMENT AND SUSTAINABILITY**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

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

9. **INDIVIDUAL AND TEAM WORK**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

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

11. **PROJECT MANAGEMENT AND FINANCE**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leaderin a team, to manage projects and in multidisciplinary environments.

12. **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.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech. in ELECTRONICS AND COMMUNICATION ENGINEERING
COURSE STRUCTURE & SYLLABUS (R18)

Applicable From 2018-19 Admitted Batch

II YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	EC301PC	Electronic Devices and Circuits	3	1	0	4
2	EC302PC	Network Analysis and Transmission Lines	3	0	0	3
3	EC303PC	Digital System Design	3	1	0	4
4	EC304PC	Signals and Systems	3	1	0	4
5	EC305ES	Probability Theory and Stochastic Processes	3	0	0	3
6	EC306PC	Electronic Devices and Circuits Lab	0	0	2	1
7	EC307PC	Digital System Design Lab	0	0	2	1
8	EC308ES	Basic Simulation Lab	0	0	2	1
9	*MC309	Constitution of India	3	0	0	0
		Total Credits	**18**	**3**	**6**	**21**

II YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA401BS	Laplace Transforms, Numerical Methods & Complex Variables	3	1	0	4
2	EC402PC	Electromagnetic Fields and Waves	3	0	0	3
3	EC403PC	Analog and Digital Communications	3	1	0	4
4	EC404PC	Linear IC Applications	3	0	0	3
5	EC405PC	Electronic Circuit Analysis	3	0	0	3
6	EC406PC	Analog and Digital Communications Lab	0	0	3	1.5
7	EC407PC	IC Applications Lab	0	0	3	1.5
8	EC408PC	Electronic Circuit Analysis Lab	0	0	2	1
9	*MC409	Gender Sensitization Lab	0	0	2	0
		Total Credits	**15**	**2**	**10**	**21**

***MC – Satisfactory/Unsatisfactory**

EC407PC: IC APPLICATIONS LAB

B.Tech. II Year II Semester

L	T	P	C
0	0	3	1.5

Note: Verify the functionality of the IC in the given application

Design and Implementation of:

1. Inverting and Non-Inverting Amplifiers using Op Amps
2. Adder and Subtractor using Op Amp.
3. Comparators using Op Amp.
4. Integrator Circuit using IC 741.
5. Differentiator Circuit using Op Amp.
6. Active filter Applications-LPF, HPF (First Order)
7. IC 741 waveform Generators-Sine, Square wave and Triangular Waves.
8. Mono-Stable Multivibrator using IC 555.
9. Astable multivibrator using IC 555.
10. Schmitt Trigger Circuits using IC 741.
11. IC 565-PLL Applications.
12. Voltage Regulator using IC 723
13. Three terminal voltage regulators-7805, 7809, 7912

Major Equipments required for Laboratories:

1. 5 V Fixed Regulated Power Supply/ 0-5V or more Regulated Power Supply.
2. 20 MHz Oscilloscope with Dual Channel.
3. Bread board and components/ Trainer Kit.
4. Multimeter.

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COs and Mapping with PO/PSO

Course : IC APPLICATIONS LAB (C227) **Class: II-ECE-B**

Course Outcomes

After completing this course the student will be able to:

C227.1: Design a inverting and Non inverting, Adder and subtract or amplifier using op-amp. (Synthesis).

C227.2: Verify a Comparator, Integrator and differentiator using op-amp and voltage regulator Using IC723 (Knowledge).

C227.3: Design Active filters, PLL (Synthesis).

C227.4: Analysis of IC741 Waveform generator sine, square, triangular Waves (Synthesis)

C227.5: Design a Monostable , Astable Multivibrator, Schmitt trigger Circuits (Synthesis)

C227.6: Identify &verify the functionalities of the linear integrated Circuits (Knowledge)

Mapping of course outcomes with program outcomes:

High -3 Medium -2 Low-1

PO / CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C227.1	2	2	3	2	-	2	-	-	-	-	-	-	3	1
C227.2	2	-	3	-	-	2	-	-	-	-	2	-	2	2
C227.3	2	-	3	-	2	2	-	-	-	-	-	3	3	1
C227.4	2	-	3	2	-	-	-	-	-	-	-	-	2	2
C227.5	3	2	3	-	-	-	-	-	-	-	2	-	3	1
C227.5	2	2	3	-	-	-	-	-	-	-	-	2	2	2
C227.6	2	2	3	2	2	2	-	-	-	-	2	2	2	2
C227	2.3	2.0	3.0	2.0	2.0	2.0	-	-	-	-	2.0	2.0	2.3	1.7

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LIST OF EXPERIMENTS AND THEIR CO, PO/PSO MAPPING

S. NO	NAME OF THE EXPERIMENT	CO	PO/PSO
1	Inverting and Non-inverting amplifiers using op-amps	C227.1	1,2,3,4, 6/1,2
2	Adder and Subtractor using op-amp	C227.1	1,2,3,4, 6/1,2
3	Comparator using op-amp	C227.2	1,3, 6,11/1,2
4	Integrator circuit using IC741	C227.2	1,3, 6,11/1,2
5	Differentiator circuit using op-amp	C227.2	1,3, 6,11/1,2
6	Active filters applications-LPF,HPF(first order)	C227.3	1,3, 5, 6,12/1,2
7	IC741 Waveform generators-Sine, Square wave and triangular waves.	C227.4	1,3,4/1,2
8	Monostable Multivibrator using IC555.	C227.5	1,2,3/1,2
9	Astable Multivibrator using IC555	C227.5	1,2,3/1,2
10	Schmitt Trigger Circuits using IC741	C227.5	1,2,3,12/1,2
11	IC565 PLL applications	C227.3	1,3, 5, 6,12/1,2
12.	Voltage Regulator using IC723	C227.2	1,3, 6,11/1,2

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Class Timetable

CLASS: II-B.Tech ECE-B **A.Y:2022-23** **SEMESTER: II** **LH: C-102**

TIME/ DAY	I 9:40-10:30	II 10:30 -11:20	III 11:20-12:10	IV 12:10-1:00	1:00-1:30	V 1:30-2:20	VI 2:20-3:10	VII 3:10-4:00
MON	EMF&W	ECA	A&DC	LTNM	LUNCH	LICA	ECA LAB / GS LAB	
TUE	LICA	A&DC	EMF&W	ECA		A&DC LAB / ICA LAB		
WED	LTNM	EMF&W	LICA	ECA		A&DC(T)/ LTNM(T)/	CO-CU/DAA	
THU	A&DC	COUN	GS LAB / ECA LAB			LTNM	EMF&W	SPORTS
FRI	ECA	EMF&W	LTNM(T)/A&DC(T)	LICA		A&DC	LTNM	LIB
SAT	LICA	LTNM	ECA	A&DC		ICA LAB / A&DC LAB		

*(T) – Tutorial Concern Faculty

Course Code	Course Name	Name of the Faculty	Course Code	Course Name	Name of the Faculty
MA401BS	LTNM-Laplace Transforms, Numerical Methods & Complex Variables	Dr.B.Mahesh	EC406PC	A&DC LAB-Analog and Digital Communications Lab	M.Ganesh/S.Naresh/K.Raiender
			EC407PC	ICA LAB-IC Applications Lab	P.Kavitha/A.Vaani/T.Divya
EC402PC	EMF&W-Electromagnetic Fields and Waves	Dr.S.Suresh	EC408PC	ECA LAB-Electronic Circuit Analysis Lab	Dr.D.Lakshmaiah/Dr.S.Suresh/ K.Mallaiah
EC403PC	A&DC-Analog and Digital Communications	S.Naresh	*MC409	GS LAB-Gender Sensitization Lab	G.Ananda Rao
EC404PC	LICA-Linear IC Applications	P.Kavitha	COUN	Counseling	B.Ashwini/T.Divya/G.Anusha
EC405PC	ECA-Electronic Circuit Analysis	Dr.D.Lakshmaiah	SPORTS	Sports	G.Nirmala/M.Srilatha
			CO-CU/DAA	Co-Curricular/ Dept. Assoc.Activities	S.Alekhya/I.Venu/K.Bhaskar Reddy
			LIB	Library	A.Sindhuja/G.Swathi

Class Incharge

Head of the Department
Electronics and Communication Engg. Dept
SRI INDU INSTITUTE OF ENGG & TECH

Principal
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IC APPLICATIONS LAB

EXTERNAL EXAM QUESTION PAPER

A.Y.2022-23 **CLASS: II** **SEMESTER:II**

1. Design & implement Adder & Subtract or using op-amp.
2. Generate square wave using Schmitt trigger.
3. Implement the comparator circuit with neat diagrams.
4. Design different wave form generators using 741 IC (sine, square).
5. Check & verify the working of mono stable multivibrator using IC555.
6. Design & implement the integrator circuit with neat wave forms.
7. Verify the active filter applications as LPF & HPF.
8. Design & implement the astable multivibrator using IC555.
9. Design inverting & non inverting amplifiers using op amps.

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

II ECE REGULAR LAB EXTERNAL EXAMS TIMETABLE

A.Y: 2022-23 **SEM: II**

S.No.	Name of the Lab	Year/ Section	Name of the Lab Internal Examiner	Date & Time
1	Analog and Digital Communications Lab	II ECE-A	Mrs.B.Jyothirmai	21.09.2023(FN)
		II ECE-B	Mr.M.Ganesh	20.09.2023(AN)
2	Electronic Circuit Analysis Lab	II ECE-A	Mrs.G.Nirmala	19.09.2023(FN)
		II ECE-B	Mrs.G.Nirmala	19.09.2023(AN)
3	IC Applications Lab	II ECE-A	Mrs.D.Aruna Kumari	20.09.2023(FN)
		II ECE-B	Mrs.P.Kavitha	21.09.2023(AN)

Timings:- **FN:** 09:40 AM – 12:40 PM **AN:** 01:00 PM – 04:00 PM

HOD/ECE
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

II ECE REGULAR LAB EXTERNAL EXAMINERS FROM TKRCET

A.Y: 2022-23 **SEM: II**

S.No.	Name of the Lab	Year/ Section	Name of the Lab Internal Examiner	Date & Time	Name of the Lab External Examiner & Designation	Lab External Examiner Contact No.
1	Analog and Digital Communications Lab	II ECE-A	Mrs.B.Jyothirmai	21.09.2023(FN)	Dr. K. Sukanya Assoc. Prof	9951018558
		II ECE-B	Mr.M.Ganesh	20.09.2023(AN)	Mrs. M. Jagruthi Asst. Prof	9703263741
2	Electronic Circuit Analysis Lab	II ECE-A	Mrs.G.Nirmala	19.09.2023(FN)	Dr. J.Sunitha Kumari Assoc. Prof	9849727103
		II ECE-B	Mrs.G.Nirmala	19.09.2023(AN)	Dr. P. Gayathri Assoc. Prof	9440337355
3	IC Applications Lab	II ECE-A	Mrs.D.Aruna Kumari	20.09.2023(FN)	Dr. Mahesh Assoc. Prof	9491457702
		II ECE-B	Mrs.P.Kavitha	21.09.2023(AN)	Dr. B. Swapna Rani Assoc. Prof	9866104554

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LAB OCCUPANCY CHART

IC APPLICATIONS LAB

A.Y : 2022-23 **SEM-II**

	I 9:40-10:30	II 10:30 -11:20	III 11:20-12:10	IV 12:10-1:00	1:00-1:30	V 1:30-2:20	VI 2:20-3:10	VII 3:10-4:00
MON					LUNCH			
TUE						ICA LAB II ECE-B		
WED						ICA LAB II ECE-A		
THU						ICA LAB II ECE-A		
FRI		MAINTENANCE						
SAT						ICA LAB II ECE-B		

LAB INCHARGE

HOD

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IC APPLICATIONS LAB

Do's & Don'ts

- All students must observe the dress code while in the laboratory
- Foods, drinks and smoking are NOT allowed
- All bags must be left at the indicated place.
- The lab time table must be strictly followed.
- Be PUNCTUAL for your laboratory session.
- Experiment must be completed within the given time.
- Noise must be kept to minimum.
- Workspace must be kept clean and tidy at all time.
- Handle all apparatus with care.
- All students are liable for any damage to equipment due to their own negligence.
- All equipment, apparatus, tools and components must be RETURNED to their original place after use.
- Students are strictly PROHIBITED from taking out any items from the laboratory.
- Report immediately to the lab supervisor if any injury occurred.
- Report immediately to the lab supervisor if any damages to equipment.

BEFORE LEAVING LAB

- Place the stools under the lab bench.
- Turn off the power to all instruments.
- Please check the laboratory notice board regularly for updates.

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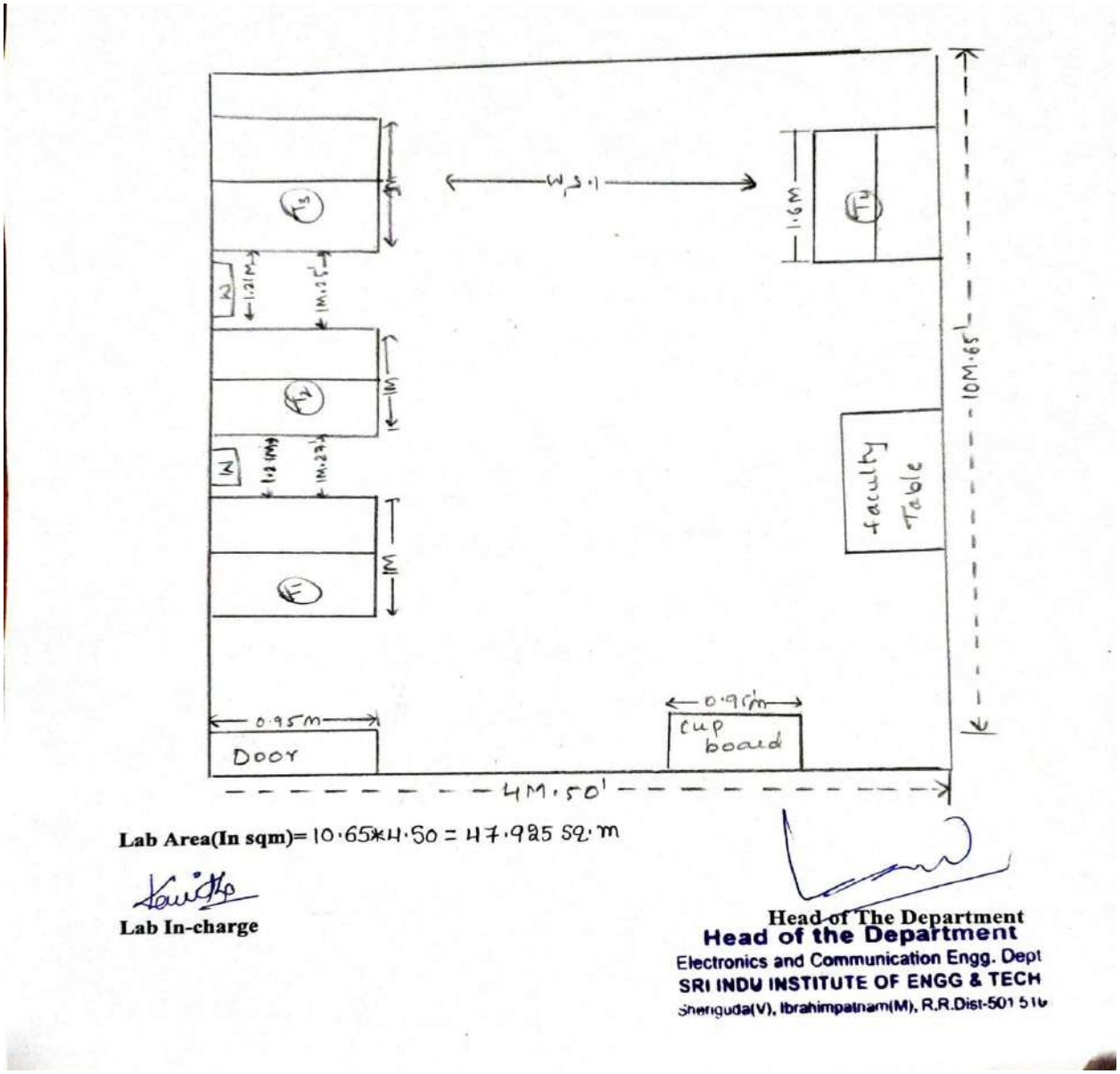
IC APPLICATIONS LAB

PHYSICAL LAB FLOOR PLAN

ROOM NO: B-306 **BLOCK:B** **FLOOR:III**



Lab Area(In sqm)= 10.65*4.50 = 47.925 Sq.m

Lab In-charge

Head of The Department

Head of the Department
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LAB MANUAL

https://drive.google.com/file/d/1pjXZ2YDU0lKvQyhwiZL5TuFH5m7gJ_GK/view?usp=sharing

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Electronics and Communication Engineering

Course Outcome Attainment (Internal Examination-1)

Name of the faculty : P.KAVITHA 2022-2023

Branch & Section: ECE - B I Internal

Course Name: IC APPLICATIONS LAB Year/Semester: II/II

S.No	HT No.	A+A+CD+MG	T+P+C+R	DDE
Max. Marks ==>		**5**	**5**	**15**
1	21X31A0438	5	5	14
2	21X31A0440	5	5	8
3	21X31A0441	4	3	7
4	21X31A0442	5	5	14
5	21X31A0443	4	5	6
6	21X31A0444	5	5	13
7	21X31A0445	5	2	7
8	21X31A0446	5	5	14
9	21X31A0447	5	5	5
10	21X31A0448	3	5	7
11	21X31A0449	4	4	7
12	21X31A0450	5	5	7
13	21X31A0451	5	5	12
14	21X31A0452	5	5	14
15	21X31A0453	4	5	8
16	21X31A0454	3	4	7
17	21X31A0455	4	4	7
18	21X31A0456	4	5	6
19	21X31A0457	5	5	5
20	21X31A0458	5	5	12
21	21X31A0459	5	5	14
22	21X31A0460	5	5	12
23	21X31A0461	4	4	7
24	21X31A0462	5	5	12
25	21X31A0463	4	3	7
26	21X31A0464	5	5	14
27	21X31A0465	5	5	13
28	21X31A0466	5	5	8
29	21X31A0467	5	5	11
30	21X31A0468	4	4	12
31	21X31A0469	5	5	13
32	21X31A0470	5	5	14
33	21X31A0471	5	5	14
34	21X31A0472	5	5	14
35	22X35A0421	5	5	13
36	22X35A0422	5	5	13
37	22X35A0423	5	5	14
38	22X35A0424	4	4	12
39	22X35A0425	5	5	14
40	22X35A0426	5	5	13
41	22X35A0427	5	3	7
42	22X35A0428	3	5	12
43	22X35A0429	5	5	8

44	22X35A0430	4	3	7
45	22X35A0431	5	5	14
46	22X35A0432	5	5	14
47	22X35A0433	5	5	10
48	22X35A0434	5	5	12
49	22X35A0435	5	4	6
50	22X35A0436	5	5	13
51	22X35A0437	4	4	7
52	22X35A0438	5	5	14
53	22X35A0439	5	5	7
54	22X35A0440	5	5	9
55	22X35A0441	5	3	7
Target set by the faculty / HoD		3.00	3.00	9.00
Number of students performed above the target		55	54	32
Number of students attempted		55	55	55
Percentage of students scored more than target		100%	98%	58%

CO Mapping with Exam Questions:

CO - 1	y	y	y
CO - 2	y	y	y
CO - 3	y	y	y
CO - 4	y	y	y
CO - 5	y	y	y
CO - 6	y	y	y

% Students Scored >Target %	100%	98%	58%

CO Attainment based on Exam Questions:

CO - 1	100%	100%	58%
CO - 2	100%	98%	58%
CO - 3	100%	98%	58%
CO - 4	100%	98%	58%
CO - 5	100%	98%	58%
CO - 6	100%	98%	58%

CO	Intrnal practica	DDE	OverallI	Level
CO-1	100%	58%	79%	3.00
CO-2	99%	58%	79%	3.00
CO-3	99%	58%	79%	3.00
CO-4	99%	58%	79%	3.00
CO-5	99%	58%	79%	3.00
CO-6	99%	58%	79%	3.00

Attainment	
1	40%
2	50%
3	60%

Attainment (Internal 1 Examination) = **3.00**

NOTE:

A+A+CD+MG : AIM+APPARATUS+CIRCUIT DIAGRAM+MODEL GRAPH

T+P+C+R : THEORY+PROCEDURE+CALCULATION+RESULT

DDE : Day to Day Evaluation

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Electronics and Communication Engineering

Course Outcome Attainment (Internal Examination-2)

Name of the faculty : P.KAVITHA 2022-2023

Branch & Section: ECE - B I Internal

Course Name: IC APPLICATIONS LAB Year/Semeste II/II

S.No	HT No.	A+A+CD+MG	T+P+C+R	DDE
Max. Marks ==>		**5**	**5**	**15**
1	21X31A0438	5	5	14
2	21X31A0440	5	4	12
3	21X31A0441	4	3	7
4	21X31A0442	5	5	14
5	21X31A0443	4	4	12
6	21X31A0444	5	4	14
7	21X31A0445	5	2	7
8	21X31A0446	5	5	14
9	21X31A0447	5	5	13
10	21X31A0448	3	4	7
11	21X31A0449	5	5	11
12	21X31A0450	3	4	7
13	21X31A0451	5	5	13
14	21X31A0452	5	5	14
15	21X31A0453	4	5	14
16	21X31A0454	3	4	7
17	21X31A0455	4	4	7
18	21X31A0456	4	3	7
19	21X31A0457	5	4	11
20	21X31A0458	3	4	13
21	21X31A0459	5	5	14
22	21X31A0460	5	5	12
23	21X31A0461	4	4	11
24	21X31A0462	4	3	7
25	21X31A0463	4	4	12
26	21X31A0464	5	4	14
27	21X31A0465	5	5	14
28	21X31A0466	5	4	14
29	21X31A0467	4	3	7
30	21X31A0468	4	4	12
31	21X31A0469	5	5	13
32	21X31A0470	5	5	14
33	21X31A0471	5	5	14
34	21X31A0472	5	5	14
35	22X35A0421	5	5	14
36	22X35A0422	5	5	14
37	22X35A0423	5	5	14
38	22X35A0424	4	4	12
39	22X35A0425	5	5	14
40	22X35A0426	5	5	14
41	22X35A0427	5	3	11
42	22X35A0428	3	5	13
43	22X35A0429	5	4	14

44	22X35A0430	4	3	7
45	22X35A0431	5	5	14
46	22X35A0432	5	5	14
47	22X35A0433	5	5	10
48	22X35A0434	5	5	14
49	22X35A0435	5	5	12
50	22X35A0436	3	4	13
51	22X35A0437	4	4	12
52	22X35A0438	5	5	14
53	22X35A0439	5	5	8
54	22X35A0440	5	5	12
55	22X35A0441	4	3	7
Target set by the faculty / HoD		3.00	3.00	9.00
Number of students performed above the target		55	54	43
Number of students attempted		55	55	55
Percentage of students scored more than target		100%	98%	78%

CO Mapping with Exam Questions:

CO - 1	y	y	y
CO - 2	y	y	y
CO - 3	y	y	y
CO - 4	y	y	y
CO - 5	y	y	y
CO - 6	y	y	y

% Students Scored >Target %	100%	98%	78%

CO Attainment based on Exam Questions:

CO - 1	100%	100%	78%	
CO - 2	100%	98%	78%	
CO - 3	100%	98%	78%	
CO - 4	100%	98%	78%	
CO - 5	100%	98%	78%	
CO - 6	100%	98%	78%	
CO	**Intrnal practica**	**DDE**	**Overall**	**Level**
CO-1	100%	78%	89%	3.00
CO-2	99%	78%	89%	3.00
CO-3	99%	78%	89%	3.00
CO-4	99%	78%	89%	3.00
CO-5	99%	78%	89%	3.00
CO-6	99%	78%	89%	3.00

Attainment Level	
1	40%
2	50%
3	60%

Attainment (Internal 2 Examination) = **3.00**

NOTE:

A+A+CD+MG : AIM+APPARATUS+CIRCUIT DIAGRAM+MODEL GR

T+P+C+R : THEORY+PROCEDURE+CALCULATION+RESULT

DDE : Day to Day Evaluation

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Electronics and Communication Engineering

Course Outcome Attainment (University Examinations)

Name of the faculty : P.KAVITHA Academic Year: 2022-2023

Branch & Section: ECE - B Year / Semester: II/II

Course Name: IC APPLICATIONS LAB

S.No	Roll Number	Marks Secured
1	21X31A0438	72
2	21X31A0440	68
3	21X31A0441	62
4	21X31A0442	72
5	21X31A0443	66
6	21X31A0444	72
7	21X31A0445	58
8	21X31A0446	72
9	21X31A0447	68
10	21X31A0448	60
11	21X31A0449	65
12	21X31A0450	60
13	21X31A0451	71
14	21X31A0452	72
15	21X31A0453	72
16	21X31A0454	67
17	21X31A0455	58
18	21X31A0456	55
19	21X31A0457	58
20	21X31A0458	65
21	21X31A0459	73
22	21X31A0460	68
23	21X31A0461	55
24	21X31A0462	72
25	21X31A0463	55
26	21X31A0464	70
27	21X31A0465	70
28	21X31A0466	66
29	21X31A0467	68
30	21X31A0468	62
31	21X31A0469	72
32	21X31A0470	70
33	21X31A0471	70
34	21X31A0472	73
Max Marks		75

S.No	Roll Number	Marks Secured
35	22X35A0421	72
36	22X35A0422	72
37	22X35A0423	68
38	22X35A0424	63
39	22X35A0425	72
40	22X35A0426	72
41	22X35A0427	60
42	22X35A0428	70
43	22X35A0429	70
44	22X35A0430	55
45	22X35A0431	73
46	22X35A0432	73
47	22X35A0433	70
48	22X35A0434	72
49	22X35A0435	63
50	22X35A0436	62
51	22X35A0437	70
52	22X35A0438	73
53	22X35A0439	65
54	22X35A0440	70
55	22X35A0441	55

Class Average mark	65
Number of students performed above the target	39
Number of successful students	55
Percentage of students scored more than target	71%

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

Attainment level	**3**

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Electronics and Communication Engineering

Course Outcome Attainment

Name of the faculty : P.KAVITHA
Academic Year: 2022-2023
Branch & Section: ECE - B
Examination:
Course Name: IC APPLICATIONS LAB
Year: II
Semester: II

Course Outcomes	1st Internal Exam	2nd Internal Exam	Internal Exam	University Exam	Attainment Level
CO1	3.00	3.00	3.00	3.00	3.00
CO2	3.00	3.00	3.00	3.00	3.00
CO3	3.00	3.00	3.00	3.00	3.00
CO4	3.00	3.00	3.00	3.00	3.00
CO5	3.00	3.00	3.00	3.00	3.00
CO6	3.00	3.00	3.00	3.00	3.00
Internal & University Attainment:			3.00	3.00	
Weightage			25%	75%	
CO Attainment for the course (Internal, University			0.75	2.25	
CO Attainment for the course (Direct Method)			3.00		

Overall course attainment level **3.00**

SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Electronics and Communication Engineering

Program Outcome Attainment (from Course)

Name of Faculty: P.KAVITHA Academic Year: 2022-2023

Branch & Section: ECE - B Year: II

Course Name: IC APPLICATIONS LAB Semester: II

CO-PO mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	-	2	3	-	-	2	-	-	-	-	-	-	3	1
CO2	2	-	3	-	-	2	-	-	-	-	2	-	2	2
CO3	-	-	3	-	2	2	-	-	-	-	-	3	3	1
CO4	-	-	3	2	-	-	-	-	-	-	-	-	2	2
CO5	3	2	3	-	-	-	-	-	-	-	2	-	3	1
CO6	2	2	1	-	-	-	-	-	-	-	-	2	2	2
Course	**2.33**	**2.00**	**2.67**	**2.00**	**2.00**	**2.00**	-	-	-	-	**2.00**	**2.50**	**2.5**	**1.5**

CO	**Course Outcome Attainment**
CO1	3.00
CO2	3.00
CO3	3.00
CO4	3.00
CO5	3.00
CO6	3.00
Overall course attainment level	**3.00**

PO-ATTAINMENT

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO Attainment	**2.33**	**2.00**	**2.67**	**2.00**	**2.00**	**2.00**	-	-	-	-	**2.00**	**2.50**	**2.50**	**1.50**

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