



ESTD : 2007

Sri Indu Institute of Engineering and Technology (Autonomous)

(Formerly RVR Institute of Engineering & Technology)

An Autonomous Institution Under UGC

NAAC Accredited. Recognized Under 2(f) of UGC Act 1956

EAMCET CODE: INDI

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

JNTUH CODE: X3



COURSE FILE

ON

ENGINEERING CHEMISTRY LAB

Course Code - CH106BS

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

Prepared by
V.MOUNIKA
Asst. Professor

Head of the Department
Department of H&S
SRI INDU INSTITUTE OF ENGG & TECH
Sheriguda(VII), Ibrahimpatnam (M) R.R. Dist-501 510

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



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Name of the Physical laboratory:	ENGINEERING CHEMISTRY LAB
Course code	CH106BS
Room No	B-104&D-103
Name of the lab incharge	K.MOUNIKA
Name of the faculty incharge	V.MOUNIKA

Index of Lab File

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1	Institute vision and mission
2	Programme outcomes
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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.

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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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SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY
B.Tech. in COMPUTER SCIENCE AND ENGINEERING (CYBER SECURITY)
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	T	P	Credits
1.	MA101BS	Matrices and Calculus	3	1	0	4
2.	CH103BS	Engineering Chemistry	3	1	0	4
3.	CS103ES	Programming for Problem Solving	3	0	0	3
4.	EE101ES	Basic Electrical Engineering	2	0	0	2
5.	ME101ES	Computer Aided Engineering Graphics	1	0	4	3
6.	CS106ES	Elements of Computer Science & Engineering	0	0	2	1
7.	CH106BS	Engineering Chemistry Laboratory	0	0	2	1
8.	CS107ES	Programming for Problem Solving Laboratory	0	0	2	1
9.	EE102ES	Basic Electrical Engineering Laboratory	0	0	2	1
		Induction Program				
		Total	12	2	12	20

I Year II Semester

S. No.	Course Code	Course	L	T	P	Credits
1.	MA201BS	Ordinary Differential Equations and Vector Calculus	3	1	0	4
2.	AP202BS	Applied Physics	3	1	0	4
3.	ME202ES	Engineering Workshop	0	1	3	2.5
4.	EN204HS	English for Skill Enhancement	2	0	0	2
5.	EC201ES	Electronic Devices and Circuits	2	0	0	2
6.	AP205BS	Applied Physics Laboratory	0	0	3	1.5
7.	CS201ES	Python Programming Laboratory	0	1	2	2
8.	EN207HS	English Language and Communication Skills Laboratory	0	0	2	1
9.	CS203ES	IT Workshop	0	0	2	1
10.	*MC201ES	Environmental Science	3	0	0	0
		Total	13	4	12	20



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ENGINEERING CHEMISTRY LABORATORY

(Course Code: CH106BS)

B.Tech. I Year I Sem.

L T P C

0 0 2 1

Prerequisites: Engineering Chemistry

Course Objectives: The course consists of experiments related to the principles of chemistry required for engineering student. The student will learn:

- Estimation of hardness of water to check its suitability for drinking purpose.
- Students are able to perform estimations of acids and bases using conductometry, potentiometry and pH metry methods.
- Students will learn to prepare polymers such as Bakelite and nylon-6 in the laboratory.
- Students will learn skills related to the lubricant properties such as saponification value, surfacetension and viscosity of oils.

Course Outcomes: The experiments will make the student gain skills on:

- Determination of parameters like hardness of water and rate of corrosion of mild steel in various conditions.
- Able to perform methods such as conductometry, potentiometry and pH metry in order to find out the concentrations or equivalence points of acids and bases.
- Students are able to prepare polymers like bakelite and nylon-6.
- Estimations saponification value, surface tension and viscosity of lubricant oils.

List of Experiments:

I. Volumetric Analysis: Estimation of Hardness of water by EDTA Complexometry method.

II. Conductometry: Estimation of the concentration of an acid by Conductometry.

III. Potentiometry: Estimation of the amount of Fe^{+2} by Potentiometry.

IV. pH Metry: Determination of an acid concentration using pH meter.

V. Preparations:

1. Preparation of Bakelite.
2. Preparation Nylon – 6.

VI. Lubricants:

1. Estimation of acid value of given lubricant oil.
2. Estimation of Viscosity of lubricant oil using Ostwald's Viscometer.

VII. Corrosion: Determination of rate of corrosion of mild steel in the presence and absence of inhibitor.



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VIII. Virtual lab experiments

1. Construction of Fuel cell and its working.
2. Smart materials for Biomedical applications
3. Batteries for electrical vehicles.
4. Functioning of solar cell and its applications.

REFERENCE BOOKS:

1. Lab manual for Engineering chemistry by B. Ramadevi and P. Aparna, S Chand Publications, New Delhi (2022)
2. Vogel's text book of practical organic chemistry 5th edition
3. Inorganic Quantitative analysis by A.I. Vogel, ELBS Publications.
- College Practical Chemistry by V.K. Ahluwalia, Narosa Publications Ltd. New De



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COURSE OUTCOMES

Course Name: Engineering Chemistry Lab (C117)

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

C117.1 Determination of parameters like hardness of water by the complexometric titrations

(Understanding L2)

C117.2 Students can able to perform the methods such as conductometry, pH metry to find out concentration of unknown solutions. (Applying L3)

C117.3 Students can determine the Potentiometry in order to find out the concentrations of acids and bases. (Applying L3)

C117.4 Students are able to synthesise Polymers-Bakelite & Nylon-6. (Applying L3)

C117.5 Students can estimate the saponification value and viscosity of the lubricants.

(Analyzing L4)

C117.6 They can able to demonstrate the rate of corrosion of mild steel in various conditions

(Understanding L2)

COs and POs & PSOs Mapping

High -3

Medium -2

Low-1

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
C117.1	2	2	-	-	-	-	1	-	-	-	-	-	-	-
C117.2	2	2	-	-	1	-	-	-	-	-	-	-	-	-
C117.3	2	1	-	1	1	-	1	-	-	-	-	-	-	-
C117.4	2	-	2	-	-	1	-	-	-	-	-	-	-	-
C117.5	2	1	-	-	-	-	1	-	-	-	-	-	-	-
C117.6	2	1	-	1	-	1	1	-	-	-	-	-	-	-
AVE	2.00	1.4	2.00	1.0	1.0	1.0	1.0	-	-	-	-	-	-	-



MAPPING OF EXPERIMENT OUTCOMES WITH CO/PO'S/PSO

EXPERIMENT OBJECTIVES	EXPERIMENT OUTCOMES	CO	PO'S
1.To estimate the total hardness of water by EDTA method.	The students will be able to analyze the nature of salts causing hardness and to solve the engineering problems arising during steam production in boilers.	C117.1	PO1, PO2 ,PO7
2.To determine the strength of the strong acid by titration with strong base conductometrically.	The student shall be able to analyze the variation of conductance values of given acid with addition of strong base using conductivity meter.	C117.2	PO1, PO2 PO5
3.To estimate the Fe^{+2} by potentiometry using $KMnO_4$.	The student shall be able to Analyze the variation of EMF values of given acid with addition of $KMnO_4$ using potentiometer.	C117.3	PO1, PO2, PO4, PO5, PO7
4.To estimate the amount of HCl present in the given volume of test solution by P^H metry.	The student shall be able to find out the concentrations of acids and bases.	C117.2	PO1, PO2 PO5
5.To prepare Bakelite polymer using Phenol and Formaldehyde.	The student shall be able to prepare the polymer of Bakelite	C117.4	PO1, PO3 PO6
6.To prepare Nylon-6,6 polymer using adipoyl chloride and hexamethylenediammine.	The student shall be able to prepare the polymer of Nylon-6,6.	C117.4	PO1, PO3 PO6
7.To determine the acid value of Coconut oil.	The student shall be able to identity and calculate the acid values of coconut oil.	C117.5	PO1, PO2 PO7



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8. To determine the viscosity of the given coconut oil and ethanol.	The students shall be able to Determine and calculate the Viscosity coefficient values of coconut oil and ethanol.	C117.5	PO1, PO2 PO7
9. To determine the rate of corrosion of mild steel in acidic medium in the absence and presence of an inhibitor and calculate the efficiency of the Inhibitor.	The student can able to understand the efficiency and function of inhibitor in the Process of corrosion.	C117.6	PO1, PO2 PO4, PO6 PO7
ADDITIONAL EXPERIMENTS			
10. To determine the strength of the weak acid by titration with strong base conductometrically.	The student shall be able to analyze the variation of conductance values of given weak acid with addition of strong base using conductivity meter.	C117.2	PO1, PO2 PO5
11. To determine the surface tension of a given liquid at room temperature using stalagmometer by drop number method.	The student shall be able to determine and calculate the surface tension values of reference liquid and given liquid	C117.5	PO1, PO2 PO7



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Class: CYBER SECURITY

Semester: I

W.E.F: 14-11-2022

LH:- D-207

	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	PPS	BEE	EC	L U N C H	M&C	PPS	EC	BEE(T)/M&C(T)
TUE	EG PRACTICE				BEE	ECSE	PPS	EC(T)/PPS(T)
WED	BEE	M&C	PPS		BEE EC LAB			PPS(T)/EC(T)
THU	M&C	BEE	M&C		PPS LAB			M&C(T)/BEE(T)
FRI	BEE EC LAB				ECSE	PPS	EC	EG(T)
SAT	EC	M&C	BEE		EG PRACTICE			LIB

Course Code	Course Name	Name of the Faculty	Course Code	Course Name	Name of the Faculty
MA101BS	Matrices and Calculus	CH.SARITHA	ME101ES	ComputerAided Engineering Graphics	M.V.B.KALYAN
CH103BS	Engineering Chemistry	K.MOUNIKA	CH106BS	Engineering Chemistry Lab	K.MOUNIKA/V.MOUNIKA
CS103ES	Programming for Problem Solving	U.NARESH	CS107ES	Programming for Problem Solving Lab	U.NARESH/G.KALYANI
EE101ES	Basic Electrical Engineering	S.NISCHALA	EE102ES	Basic Electrical Engineering Lab	S.NISCHALA/G.BHARGAVI
CS106ES	Elements of Computer Science & Engineering	D.UMA			

K. Mounika
 Class In-Charge

Ch. Saritha
 Time Table Coordinator



[Signature]

Head of The Department
Dr. R. YADAGIRI RAO
 M.Sc., B.Ed., M.Tech(CSE), Ph.D.
 Head of the Department
 Department of H&S
 SRI INDU INSTITUTE OF ENG & TECH
 Sheriguda(V), Ibrahimpatnam (M), R.R. Dist-501 510.



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X3

BR22

Lab External Question paper

Year & Semester: I-I

Branch: CYBER SECURITY

Subject Name: Engineering Chemistry Lab

Faculty Name: V.MOUNIKA

EXTERNAL EXAM QUESTION PAPER

1. Estimate the total hardness of water by complexometric method using EDTA.
2. Estimate of an HCl by conductometric titration.
3. Estimate of Fe^{+2} by potentiometry using by KMNO_4 .
4. Determine the acid concentration by using P^{H} meter.
5. Estimate of an acetic acid by conductometric titration.
6. Determine the viscosity of a given liquid by using Ostwald's viscometer.
7. Write about preparation of Bakelite.
8. Write about preparation of nylon -6,6.
9. Determine the acid value of coconut oil.
10. Determine the surface tension of given liquid by using stalagmometer.



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EC Lab External Time Table Examination Branch

A.Y.: 2022-23

SEM-I

DATE	Day	Branch	Session	HT.No	Total No of Students
11-3-2023	SATURDAY	CSE-A	FN	22X31A0501 TO 22X31A0565	65
11-3-2023	SATURDAY	CSE-B	AN	22X31A0566 TO 22X31A05D0	65
13-3-2023	MONDAY	CSE-C	FN	22X31A05D1 TO 22X31A05J1	61
13-3-2023	MONDAY	CYBER SECURITY	AN	22X31A6201 TO 22X31A6262	62
14-3-2023	TUESDAY	DS	FN	22X31A6701 TO 22X31A6764	64

FN: 9:40am to 12:25pm

AN: 1:00pm to 4:00pm


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EC Lab External Time Table with examiners SEM-I

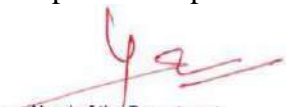
DATE	Day	Branch	Session	HT.No	Total No of Students	Internal Examiner	External Examiner
11-3-2023	SATURDAY	CSE-A	FN	22X31A0501 TO 22X31A0565	65	O.SUBHASHINI	A. Koteswarao (Asst.Prof) TKRCET 8179731744
11-3-2023	SATURDAY	CSE-B	AN	22X31A0566 TO 22X31A05D0	65	V.MOUNIKA	A.Koteswarao (Asst.Prof) TKRCET 8179731744
13-3-2023	MONDAY	CSE-C	FN	22X31A05D1 TO 22X31A05J1	61	K.MOUNIKA	S. Anusha (Asst.Prof) TKRCET 9908590046
13-3-2023	MONDAY	CYBER SECURITY	AN	22X31A6201 TO 22X31A6262	62	K.MOUNIKA	S. Anusha (Asst.Prof) TKRCET 9908590046
14-3-2023	TUESDAY	DS	FN	22X31A6701 TO 22X31A6764	64	O.SUBHASHINI	U.Anand (Asst.Prof) TKRCET 9848376155

A.Y. : 2022-23

SEM-I

FN: 9:40am to 12:25pm

AN: 1:00pm to 4:00pm


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LAB OCCUPANCY CHART

ENGINEERING CHEMISTRY LAB

Class: I B.Tech

Semister-1

W.E.F-14-11-2022

LH:B-104

	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	MAINTAINANCE			L U N C H	I BTECH I SEM DATA SCIENCE			
TUE	I BTECH I SEM CSE-B				I BTECH I SEM CSE-A			
WED	I BTECH I SEM CSE-C				I BTECH I SEM CYBER SECURITY			
THU	MAINTAINANCE							
FRI								
SAT								


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LAB OCCUPANCY CHART

ENGINEERING CHEMISTRY LAB

Class: I B.Tech

Semester-1

W.E.F-14-11-2022

LH: D-103

	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	MAINTAINANCE			L U N C H					
TUE									
WED									
THU	I BTECH I SEM CSE-B					I BTECH I SEM DATA SCIENCE			
FRI	I BTECH I SEM CYBER SECURITY					MAINTAINANCE			
SAT	I BTECH I SEM CSE-A					I BTECH I SEM CSE-C			


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ENGINEERING CHEMISTRY LAB

Course: B. Tech. I Year

SUB CODE:CH106BS

Do's

1. Attend all the practical classes with
 - a) Observation note book
 - b) Chemistry practical manual
 - c) A neat hand kerchief
2. Follow the instructions of your Lecturer carefully.
3. Read the experiment perfectly before starting.
4. Take the required apparatus and clean them.
5. The observations should be noted in the note book immediately.
6. Clean the apparatus immediately after the experiment and return to the concerned lab incharge.
7. Do the calculation and get the signature of Lecturer on the observation note book.
8. Always throw the pieces of papers, broken glass pieces etc., in a waste basket only.
9. The observations and calculations should be recorded neatly in the record book and submit the same of the lecturer.

Don'ts

1. Don't handle the apparatus roughly; it leads in damage (or) breakage.
2. Don't perform the experiment with incomplete knowledge, it may lead you in confusion.
3. Don't use excess amount of chemicals (or) reagents.
4. Don't consult your fellow student, if you have doubt in the experiment, consult Lecturer only.
5. Don't throw any solid matter in the sink. Don't waste the chemical or reagent.
6. Don't taste any chemical and inhale poisonous gases.
7. Don't waste the water. If it is not required, the tap must be closed.
8. Don't leave the laboratory unless your work bench is clean and all the apparatus is returned to the attender.

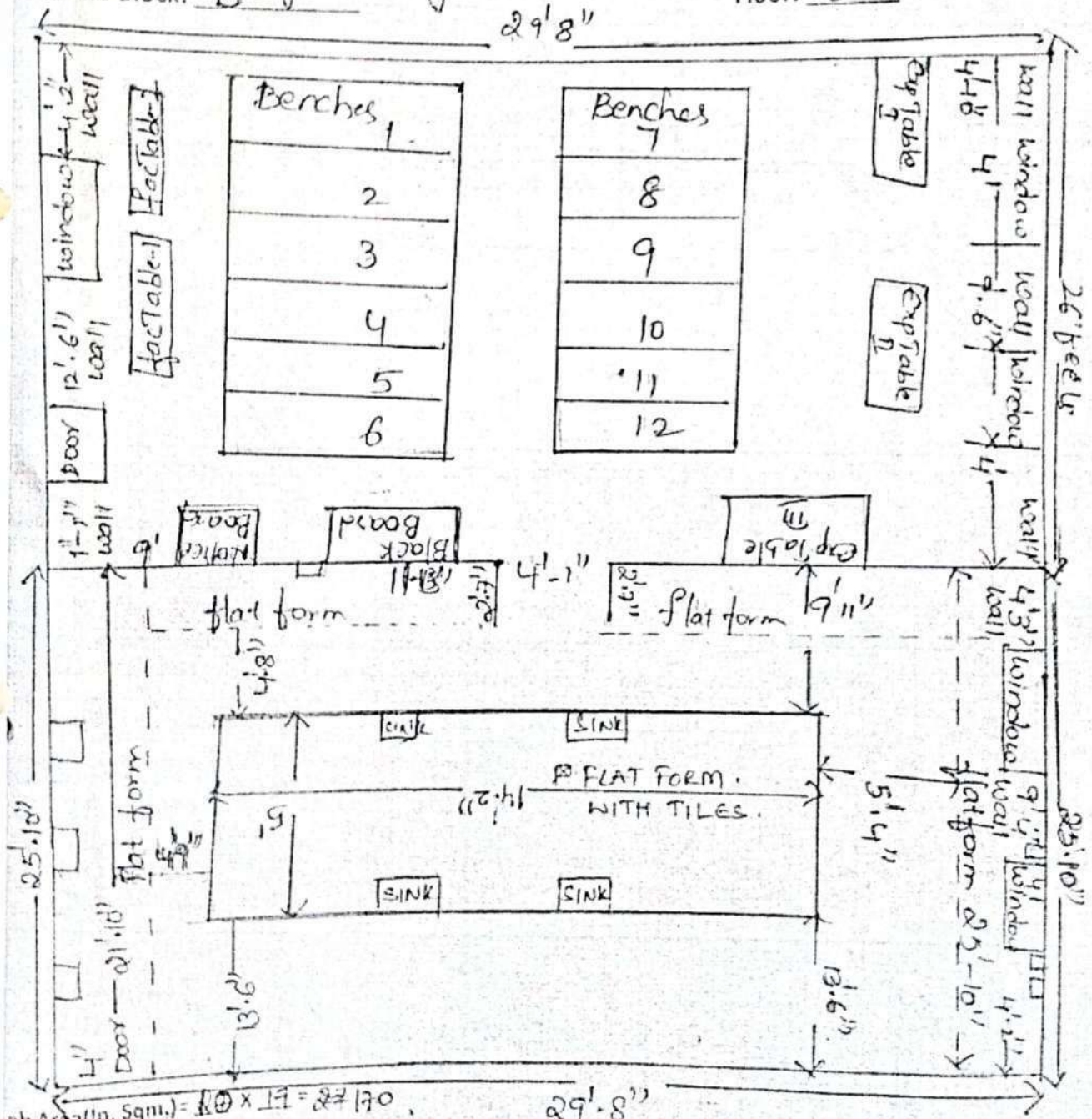


SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY
 Sheriguda (V), Ibrahimpatnam (M), R.R. Dist-501 510
DEPARTMENT OF HUMANITIES AND SCIENCES

PHYSICAL LAB FLOOR PLAN

NAME: Engineering chemistry
 Block of the Block: B V

ROOM NO: B-104
 Floor: I



Lab Area (In. Sqm.) = $20 \times 17 = 27170$
 Lab Area (In. Sft.) = $30 \times 52 = 1560$

LAB In charge

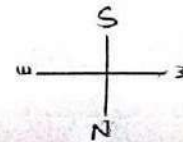
[Signature]
 Head of the Department



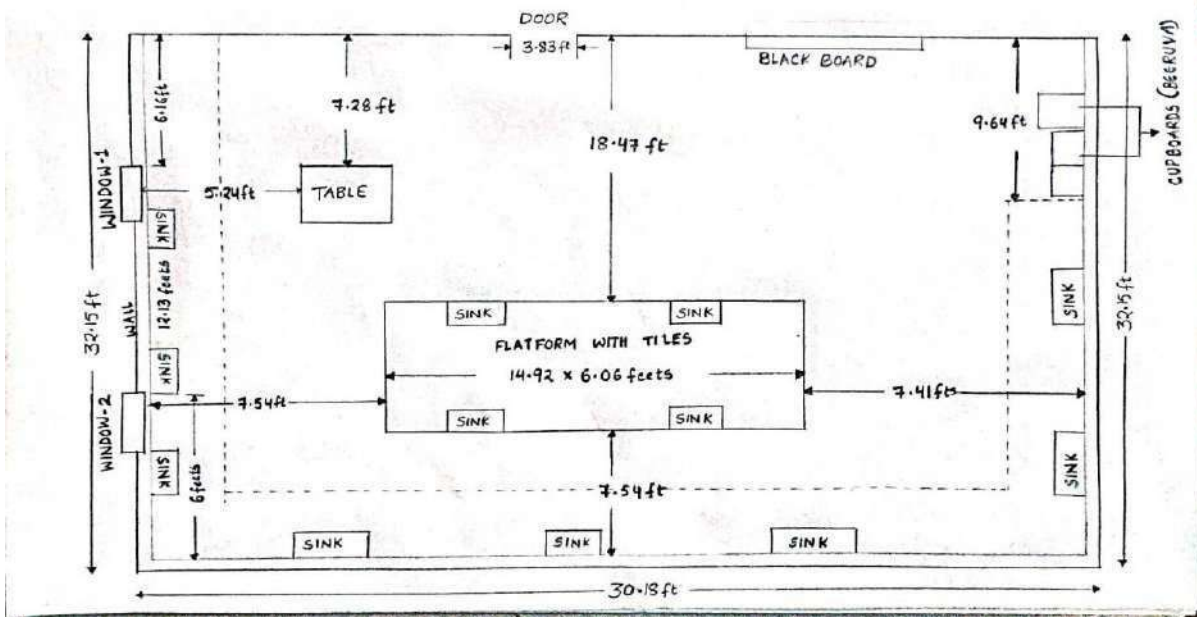
PHYSICAL LAB FLOOR-1 PLAN

ROOM NO - D103

CHEMISTRY LAB



Window dimensions = 4x4 feet



Lab area in sq.m = $9.198 \times 9.80 = 90.14$

Lab area in sq.ft = $30.18 \times 32.15 = 970.287$

Qual
LAB in charge

[Signature]
Head of the Department
Department of H&S
SRI INDU INSTITUTE OF ENGG & TECH
Sheriguda (V) Ibrahimpatnam (M) R.R. Dist-501 510



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

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(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510

Lab manual link

<https://drive.google.com/file/d/1QjP0tK0jpATEqLV1Wcww6fUdJzJ8mwi9/view?usp=sharing>

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Humanities and Sciences



Course Outcome Attainment (Internal Examination-I)

Name of the faculty : V MOUNIKA Academic Year: 2022-23
 Branch & Section: CYBER SECURITY Examination: INTERNAL -I
 Lab Course Name: ENGINEERING CHEMISTRY Year/semester I/I

S.No	HT No.	R+O+A	V+V	E+E+R
Max. Marks ==>		10	10	10
1	22X31A6201	9	7	10
2	22X31A6202	9	6	9
3	22X31A6203	10	9	10
4	22X31A6204	10	5	7
5	22X31A6205	10	7	9
6	22X31A6206	10	7	8
7	22X31A6207	9	6	10
8	22X31A6208	10	6	10
9	22X31A6209	9	6	8
10	22X31A6210	10	9	10
11	22X31A6211	10	7	10
12	22X31A6212	9	7	10
13	22X31A6213	10	6	8
14	22X31A6214	10	7	10
15	22X31A6215	8	5	8
16	22X31A6216	9	8	10
17	22X31A6217	10	5	8
18	22X31A6218	10	5	7
19	22X31A6219	10	6	10
20	22X31A6220	10	5	8
21	22X31A6221	10	7	10
22	22X31A6222	7	4	9
23	22X31A6223	10	5	10
24	22X31A6224	10	5	10
25	22X31A6225	9	7	10
26	22X31A6226	10	5	8
27	22X31A6227	10	9	10
28	22X31A6228	8	6	10
29	22X31A6229	9	6	10
30	22X31A6230	10	8	10
31	22X31A6231	10	7	10
32	22X31A6232	10	7	9
33	22X31A6233	10	8	10
34	22X31A6234	9	6	10
35	22X31A6235	9	6	9
36	22X31A6236	10	9	10
37	22X31A6237	9	8	10
38	22X31A6238	10	9	10
39	22X31A6239	10	7	9
40	22X31A6240	10	8	6
41	22X31A6241	A	A	A
42	22X31A6242	10	6	7
43	22X31A6243	10	9	10
44	22X31A6244	9	6	8
45	22X31A6245	10	9	10
46	22X31A6246	10	8	10
47	22X31A6247	10	7	10
48	22X31A6248	10	9	10
49	22X31A6249	A	A	A
50	22X31A6250	A	A	A
51	22X31A6251	9	6	9
52	22X31A6252	9	7	9
53	22X31A6253	10	9	10
54	22X31A6254	10	7	10
55	22X31A6255	10	6	10
56	22X31A6256	8	6	10
57	22X31A6257	10	6	9
58	22X31A6258	10	6	8
59	22X31A6259	10	9	10
60	22X31A6260	10	7	10
61	22X31A6261	10	6	9
62	22X31A6262	10	6	10

R+O+A : RECORD+OBSERVATION+ATTANDANCE

V+V: VIVA VOICE

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

Target set by the faculty / HoD	6.00	6.00	6.00				
Number of students performed above the target	59	50	59				
Number of students attempted	62	62	62				
Percentage of students scored more than target	95%	81%	95%				
CO Mapping with Exam Questions:							
CO - 1	Y	Y	Y				
CO - 2	Y	Y	Y				
CO - 3	Y	Y	Y				
CO - 4							
CO - 5							
CO - 6							
CO Attainment based on Exam Questions:							
CO - 1	95%	95%	95%				
CO - 2	95%	95%	95%				
CO - 3	95%	95%	95%				
CO - 4							
CO - 5							
CO - 6							
CO	Intrnal practica	E+E+R	OverallI	Level	Attainment Level		
CO-1	95%	95%	95%	3	1	40%	
CO-2	95%	95%	95%	3	2	50%	
CO-3	95%	95%	95%	3	3	60%	
CO-4							
CO-5							
CO-6							
Attainment (Internal 1 Examination) =				3			

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Humanities and Sciences



Course Outcome Attainment (Internal Examination-2)

Name of the faculty : V MOUNIKA Academic Year: 2022-23
 Branch & Section: CYBER SECURITY Examination: INTERNAL-II
 Lab Course Name: ENGINEERING CHEMISTRY Year/semester I/I

S.No	HT No.	R+O+A	V+V	E+E+R	ppt
Max. Marks ==>		10	10	10	10
1	22X31A6201	9	6	7	10
2	22X31A6202	10	8	10	10
3	22X31A6203	9	10	10	10
4	22X31A6204	10	8	10	10
5	22X31A6205	10	9	10	10
6	22X31A6206	10	10	10	10
7	22X31A6207	10	9	10	10
8	22X31A6208	10	10	10	10
9	22X31A6209	9	6	8	10
10	22X31A6210	10	7	10	10
11	22X31A6211	10	8	10	10
12	22X31A6212	10	8	10	10
13	22X31A6213	10	10	10	10
14	22X31A6214	10	9	10	10
15	22X31A6215	10	6	10	10
16	22X31A6216	10	6	10	10
17	22X31A6217	10	9	10	10
18	22X31A6218	10	9	10	10
19	22X31A6219	10	10	10	10
20	22X31A6220	10	10	10	10
21	22X31A6221	10	9	10	10
22	22X31A6222	10	6	9	10
23	22X31A6223	10	9	10	10
24	22X31A6224	10	7	10	10
25	22X31A6225	10	8	10	10
26	22X31A6226	A	A	A	10
27	22X31A6227	10	9	10	10
28	22X31A6228	10	8	10	10
29	22X31A6229	10	8	10	10
30	22X31A6230	10	9	10	10
31	22X31A6231	10	7	10	10
32	22X31A6232	10	9	10	10
33	22X31A6233	10	8	10	10
34	22X31A6234	9	7	10	10
35	22X31A6235	10	7	9	10
36	22X31A6236	10	8	10	10
37	22X31A6237	10	8	10	10
38	22X31A6238	10	6	9	10
39	22X31A6239	10	8	10	10
40	22X31A6240	10	8	10	10
41	22X31A6241	10	7	10	10
42	22X31A6242	10	8	10	10
43	22X31A6243	10	10	10	10
44	22X31A6244	10	8	10	10
45	22X31A6245	10	10	10	10
46	22X31A6246	10	10	10	10
47	22X31A6247	10	10	10	10
48	22X31A6248	10	10	10	10
49	22X31A6249	10	8	10	10
50	22X31A6250	A	A	A	A
51	22X31A6251	10	8	10	10
52	22X31A6252	10	6	9	10
53	22X31A6253	10	10	10	10
54	22X31A6254	10	8	10	10
55	22X31A6255	10	8	10	10
56	22X31A6256	10	7	10	10
57	22X31A6257	10	10	10	10
58	22X31A6258	10	10	10	10
59	22X31A6259	10	9	10	10
60	22X31A6260	10	9	10	10
61	22X31A6261	10	8	10	10
62	22X31A6262	10	8	10	10

R+O+A : RECORD+OBSERVATION+ATTANDANCE

V+V: VIVA VOICE

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

Target set by the faculty / HoD	6.00	6.00	6.00	6.00				
Number of students performed above the target	60	60	60	61				
Number of students attempted	62	62	62	62				
Percentage of students scored more than target	97%	97%	97%	98%				
CO Mapping with Exam Questions:								
CO - 1								
CO - 2								
CO - 3								
CO - 4	Y	Y	Y	Y				
CO - 5	Y	Y	Y	Y				
CO - 6	Y	Y	Y	Y				
CO Attainment based on Exam Questions:								
CO - 1								
CO - 2								
CO - 3								
CO - 4	97%	97%	97%	97%				
CO - 5	97%	97%	97%	97%				
CO - 6	97%	97%	97%	97%				
CO	Intrnal practical	E+E+R	ppt	OverallI	Level	Attainment Level		
CO-1						1	40%	
CO-2						2	50%	
CO-3						3	60%	
CO-4	97%	97%	97%	97%	3			
CO-5	97%	97%	97%	97%	3			
CO-6	97%	97%	97%	97%	3			
Attainment (Internal 2 Examination) =					3			

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY



Department of Humanities and Sciences

Course Outcome Attainment

Name of the faculty	V MOUNIKA	Academic Year:	2022-23		
Branch & Section:	CYBER SECURITY	Year / Semester:	I/I		
Lab Course Name:	ENGINEERING CHEMISTRY				
Course Outcomes	1st Internal Exam	2nd Internal Exam	Internal Exam	University Exam	Attainment Level
CO1	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
Internal & University Attainment:			3.00	3.00	
Weightage			70%	30%	
CO Attainment for the course (Internal, University)			2.10	0.90	
CO Attainment for the course (Direct Method)			3.00		
Overall course attainment level					3.00



SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOG

Department of Humanities and Sciences

Program Outcome Attainment (from Course)

Name of Faculty:	V MOUNIKA	Academic Year:	2022-23
Branch & Section:	CYBER SECURITY	Year / Semester:	I/I
Course Name:	ENGINEERING CHEMISTRY		

CO-PO mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	2					1							
CO2	2	2			1									
CO3	2	1		1	1		1							
CO4	2		2			1								
CO5	2	1					1							
CO6	2	1		1		1	1							
Course	2.00	1.40	2.00	1.00	1.00	1.00	1.00							

CO	Course Outcome Attainment
	3.00
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
CO Attainment	2.00	1.40	2.00	1.00	1.00	1.00	1.00					

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