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 - CH206BS

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

Prepared by
K.MOUNIKA
Asst. Professor

Head of the Department
Department of H&S
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.

Name of the Physical laboratory:	ENGINEERING CHEMISTRY LAB
Course code	CH206BS
Room No	D-103 & B-104
Name of the lab incharge	K.MOUNIKA
Name of the faculty incharge	K.MOUNIKA

Index of Lab File

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
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SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

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Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510
Website: https://siiet.ac.in/

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.

Head of the Department
Department of H&S
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Sheriguda(V) Ibrahimpatnam (M) R.R. Dist-501 510

SRI INDU INSTITUTE OF ENGINEERING ANDTECHNOLOGY

B. Tech.in ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

COURSE STRUCTURE, I YEAR SYLLABUS (BR 22 Regulations)

Applicable from Academic Year:2022-23Batch

I YearI Semester

S. No.	Course Code	Course Title	L	T	P	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**

IYearII Semester

S. No.	Course Code	Course Title	L	T	P	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	1	0	4	3
4.	EE201ES	Basic Electrical Engineering	2	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	0	2	1
		Total	**11**	**3**	**12**	**20**

ENGINEERING CHEMISTRY LABORATORY
(Course Code: CH206BS)

B.Tech. I Year II 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 requiredfor 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 variousconditions.
- Able to perform methods such as conductometry, potentiometry and pH metry in order to findout 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 Potentiomentry.

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.

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 (C126)

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

C126.1 Determination of parameters like hardness of water by the complexometric titrations (Understanding L2)

C126.2 Students can able to perform the methods such as conductometry, pH metry to find out concentration of unknown solutions. (Applying L3)

C126.3 Students can determine the Potentiometry in order to find out the concentrations of acids and bases. (Applying L3)

C126.4 Students are able to synthesise Polymers-Bakelite & Nylon-6. (Applying L3)

C126.5 Students can estimate the saponification value and viscosity of the lubricants. (Analyzing L4)

C126.6 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
C126.1	2	2	-	-	-	-	1	-	-	-	-	-	-	-
C126.2	2	2	-	-	1	-		-	-	-	-	-	-	-
C126.3	2	1	-	1	1	-	1	-	-	-	-	-	-	-
C126.4	2	-	2	-	-	1		-	-	-	-	-	-	-
C126.5	2	1	-	-	-		1	-	-	-	-	-	-	-
C126.6	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.	C126.1	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.	C126.2	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.	C126.3	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.	C126.2	PO1, PO2 PO5
5.To prepare Bakelite polymer using Phenol and Formaldehyde.	The student shall be able to prepare the polymer of Bakelite	C126.4	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.	C126.4	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.	C126.5	PO1, PO2 PO7

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.	C126.5	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.	C126.6	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.	C126.2	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	C126.5	PO1, PO2 PO7

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Class: AI &DS **Semester: II** **W.E.F-03-04-2023** **LH:-D-210**

	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	CAEG PRACTICE			LUNCH	EC	BEE	EDC	LIBRARY
TUE	EC/BEE LAB				ODE	EC	BEE	BEE(T)/EDC(T)
WED	ITWS LAB				ODE	EDC	BEE	PYTHON(T)
THU	ODE	EC	EDC		EC/BEE LAB			ODE(T)/EC(T)
FRI	BEE	ODE	ODE		CAEG PRACTICE			EDC(T)/ BEE(T)
SAT	EDC	EC	BEE		PYTHON LAB			EC(T)/ODE(T)

Course Code	Course Name	Name of the Faculty	Course Code	Course Name	Name of the Faculty
MA201BS	ODE-Ordinary Differential Equations & Vector Calculus	V.SUJATHA	CH206BS	EC LAB-Engineering Chemistry Laboratory	K.MOUNIKA/V.MOUNIKA
CH203BS	EC-Engineering Chemistry	K.MOUNIKA	EE202ES	BEE LAB-Basic Electrical Engineering Laboratory	G.BHARGAVI/K.RAJASHEKAR
ME201ES	CAEG-Computer Aided Engineering Graphics	A.MALLESH	CS201ES	PYTHON Programming Laboratory	M.TEJASWI/ P.BALU
EE201ES	BEE-Basic Electrical Engineering	G.BHARGAVI	CS203ES	ITWS-IT Workshop	N.KEERTHI CHANDANA/B.SWATHI
EC201ES	EDC-Electronic Devices & Circuits	P.SRILATHA			

Class In-Charge **Time Table Coordinator** **Head of The Department**

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Ibrahimpatnam(M), R.R. Dist.

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X3

BR22

Lab External Question paper

Year & Semester: I-II Branch: AI&DS

Subject Name: Engineering Chemistry Lab Faculty Name: K.MOUNIKA

EXTERNAL EXAM QUESTION PAPER

1. Estimate the total hardness of water by complex ometric method using EDTA. [CREATING L6]
2. Estimate of an HCL by conductometric titration. [EVALUATING L5]
3. Estimate of Fe+2 by Potentiometry using by kmno4. [EVALUATING L5]
4. Determine the acid concentration by using PH meter. [EVALUATING L5]
5. Estimate of an acetic acid by conductometric titration. [EVALUATING L5]
6. Ditermine the viscosity of a given liquid by using Ostwald's viscometer. [EVALUATING L5]
7. Write about preparation of Bakelite. [REMEMBARING L1]
8. Write about preparation of Nylon 6,6. [REMEMBARING L1]
9. Determine the acid value of coconut oil. [REMEMBARING L1]
10. Determine the surface tension of a given liquid by using stalagmometer. [REMEMBARING L1]

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EC Lab External Time Table
Examination Branch

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

DATE	Day	Branch	Session	HT.No	Total No of Students
21-8-2023	MONDAY	ECE & CIVIL	FN	**22X31A0401 TO 22X31A0464 22X31A0101 TO 22X31A0103**	67
22-8-2023	TUESDAY	IOT	FN	**22X31A6901 TO 22X31A6963**	63
23-8-2023	WEDNESDAY	AI&ML-B	FN	**22X31A6651 TO 22X31A6697**	47
24-8-2023	THURSDAY	AI&ML-B	FN	**22X31A6601 TO 22X31A6650**	50
25-8-2023	FRIDAY	AI&DS	FN	**22X31A7201 TO 22X31A7264**	64

FN: 9:40am to 12:25pm

Head of the Department
Department of H&S
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EC Lab External Time Table

Examination Branch

A.Y:2022-2023 **SEM-II**

Date	Day	Branch	Session	HT.NO	Total No. of Students	Remarks	
						Internal examiner	External examiner
21-08-2023	MONDAY	ECE & CIVIL	FN	22X31A0401 TO 22X31A0464 22X31A0101 TO 22X31A0103	67	O.SUBHASHINI	D.Swathi 7032248997 Asst.prof BIIET
22-08-2023	TUESDAY	IOT	FN	22X31A6901 TO 22X31A6963	63	V.MOUNIKA	Dr.Nagaveni 9959073712 Assoc.prof BIIET
23-08-2023	WEDNESDAY	AI&ML-B	FN	22X31A6651 TO 22X31A6697	47	O.SUBHASHINI	Dr.Rinki kumar 7488730602 Asst.prof BIIET
24-08-2023	THURSDAY	AI&ML-A	FN	22X31A6601 TO 22X31A6650	50	V.MOUNIKA	Dr.Litun swain 9489576721 Asst.prof BIIET
25-08-2023	FRIDAY	AI&DS	FN	22X31A7201 TO 22X31A7264	64	K.MOUNIKA	Dr.Shahroora sameen 9149454924 Asst.prof BIIET

FN: 9:40AM to 12:25PM

Head of the Department
Department of H&S
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LAB OCCUPANCY CHART

ENGINEERING CHEMISTRY LAB

Class :I B.Tech **Semister-II** **LH:B-104**

	I	II	III		IV	V	VI	VII
	9:40-10:30	10:30 -11:20	11:20-12:10	12:10-12.45	12.45-1.35	1.35-2.25	2.25-3.15	3.15-4.00
MON	I BTECH II SEM AI&ML-A			LUNCH				
TUE	I BTECH II SEM AI&DS				I BTECH II SEM AI&ML-B			
WED	I BTECH IISEM ECE				I BTECH II SEM IOT			
THU	MAINTAINANCE							
FRI								
SAT								

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LAB OCCUPANCY CHART

ENGINEERING CHEMISTRY LAB

Class :I B.Tech **Semister-II** **LH: D-103**

	I	II	III		IV	V	VI	VII
	9:40-10:30	10:30 -11:20	11:20-12:10	12:10-12.45	12.45-1.35	1.35-2.25	2.25-3.15	3.15-4.00
MON	MAINTAINANCE							
TUE								
WED								
THU					I BTECH II SEM AI&DS			
FRI	I BTECH II SEM AI&ML-A				I BTECH IISEM ECE			
SAT	I BTECH II SEM IOT				I BTECH II SEM AI&ML-B			

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ENGINEERING CHEMISTRY LAB

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 in 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.

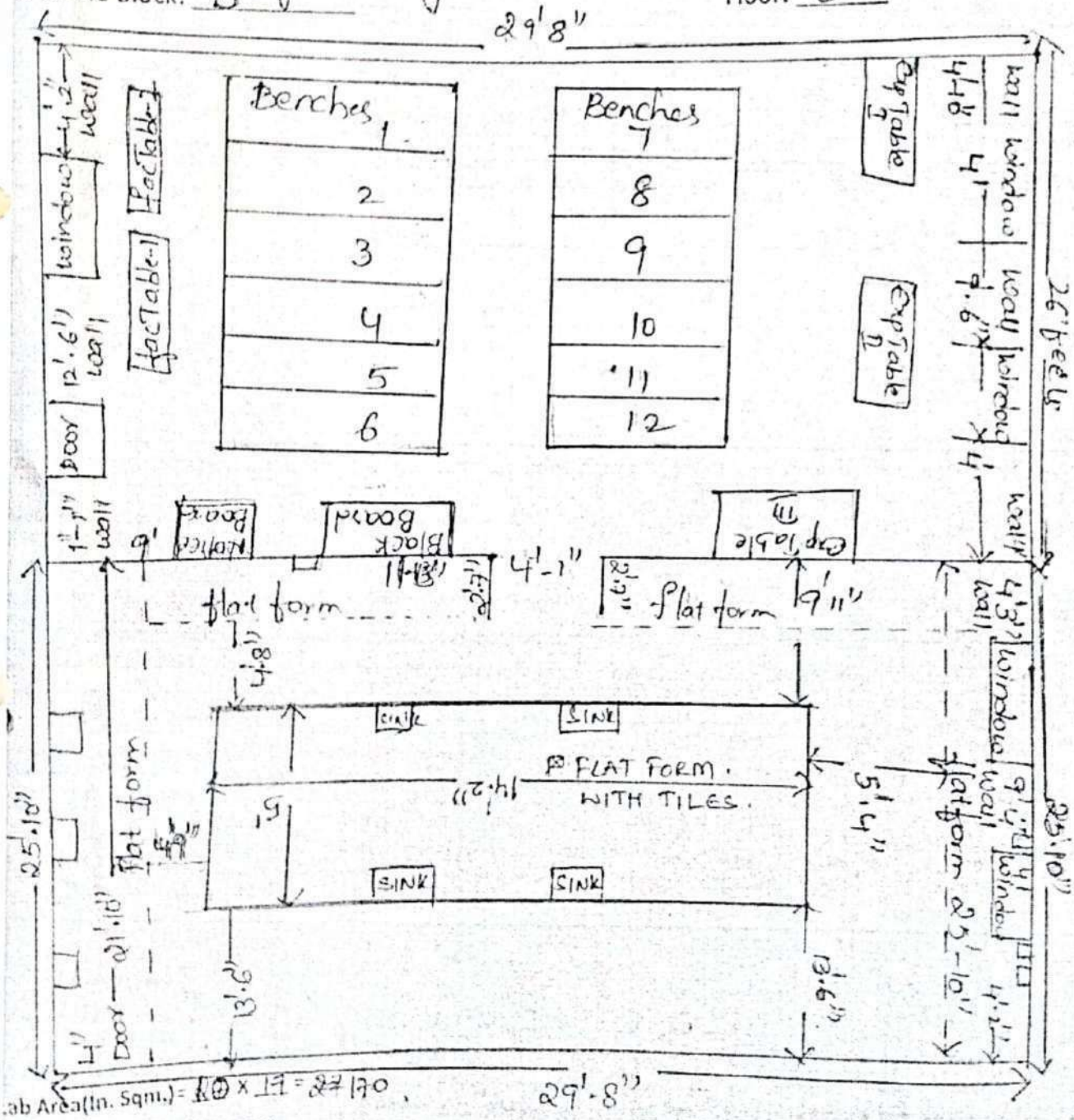
Don'ts

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 ROOM NO: B-104
ne of the Block: B Floor: I



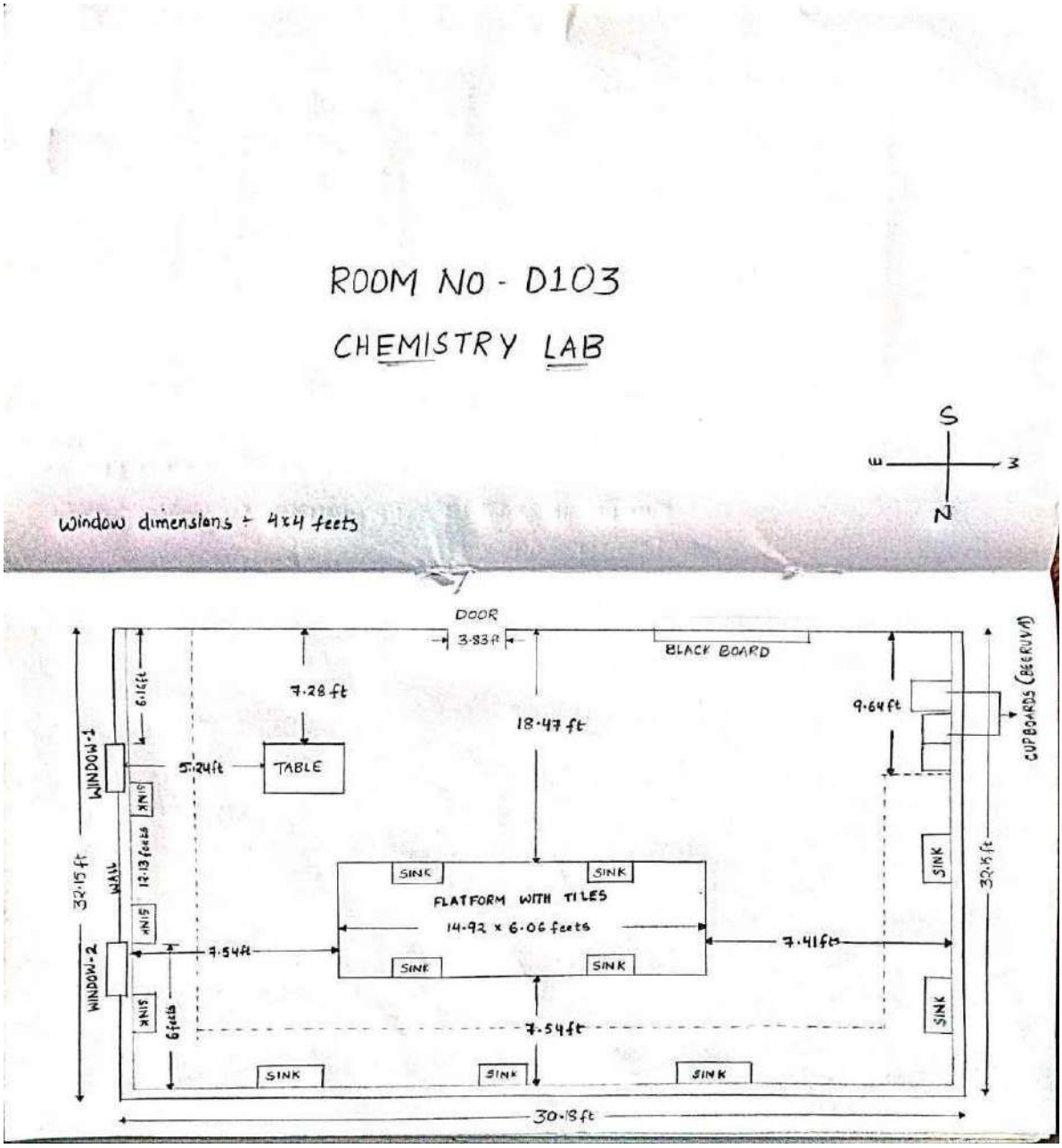
Lab Area(In. Sqm.)= 30 x 52 = 1560.

Lab Area (In. Sft.)= 30 x 52 = 1560

LAB In-charge

Head of the Department

PHYSICAL LAB FLOOR-1 PLAN



Lab area in sq.m=9.198*9.80=90.14
Lab area in sq.ft =30.18*32.15=970.287

LAB in charge

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

Lab manual link

https://drive.google.com/file/d/1-kd3ieekIp3ipx4CgNmOaQkWM6KYWiTc/view?usp=sharing

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLO

Department of Humanities and Sciences

Course Outcome Attainment (Internal Examination-1)

Name of the faculty :	K.MOUNIKA	Academic Year:	2022-23
Branch & Section:	AI&DS	Examination:	INTERNAL -I
Lab Course Name:	ENGINEERING CHEMISTRY	Year/semester	I/II

S.No	HT No.	R+O+A	V+V	E+E+R
Max. Marks ==>		10	10	10
1	22X31A7201	A	A	A
2	22X31A7202	8	7	10
3	22X31A7203	10	10	10
4	22X31A7204	9	5	10
5	22X31A7205	9	6	10
6	22X31A7206	9	3	10
7	22X31A7207	7	5	10
8	22X31A7208	10	6	10
9	22X31A7209	9	7	10
10	22X31A7210	9	9	10
11	22X31A7211	10	9	10
12	22X31A7212	8	5	10
13	22X31A7213	10	9	10
14	22X31A7214	8	5	10
15	22X31A7215	10	5	10
16	22X31A7216	7	3	10
17	22X31A7217	10	9	10
18	22X31A7218	9	7	10
19	22X31A7219	10	8	10
20	22X31A7220	7	7	10
21	22X31A7221	8	6	10
22	22X31A7222	9	7	10
23	22X31A7223	9	9	10
24	22X31A7224	9	3	10
25	22X31A7225	9	6	10
26	22X31A7226	10	9	10
27	22X31A7227	10	9	10
28	22X31A7228	9	6	10
29	22X31A7229	9	7	10
30	22X31A7230	7	5	10
31	22X31A7231	6	5	10
32	22X31A7232	9	5	10
33	22X31A7233	10	9	10
34	22X31A7234	6	2	7
35	22X31A7235	10	10	10
36	22X31A7236	9	9	10
37	22X31A7237	9	5	10
38	22X31A7238	9	5	10
39	22X31A7239	10	6	10
40	22X31A7240	A	A	A
41	22X31A7241	9	5	10
42	22X31A7242	10	10	10
43	22X31A7243	9	7	10
44	22X31A7244	9	5	10
45	22X31A7245	10	10	10
46	22X31A7246	8	6	10
47	22X31A7247	6	2	7
48	22X31A7248	10	10	10
49	22X31A7249	10	10	10
50	22X31A7250	9	10	10
51	22X31A7251	6	4	10
52	22X31A7252	10	8	10
53	22X31A7253	9	9	10
54	22X31A7254	9	7	10
55	22X31A7255	10	8	10
56	22X31A7256	7	3	10
57	22X31A7257	10	9	10
58	22X31A7258	8	5	10
59	22X31A7259	10	8	10
60	22X31A7260	8	8	10
61	22X31A7261	9	6	10
62	22X31A7262	9	6	10
63	22X31A7263	9	5	10
64	22X31A7264	6	5	9

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	62	40	62
Number of students attempted	64	64	64
Percentage of students scored more than target	97%	63%	97%

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	97%	97%	97%
CO - 2	97%	97%	97%
CO - 3	97%	97%	97%
CO - 4			
CO - 5			
CO - 6			

CO	Intr nal pr actica	E+E+R	OverallI	Level
CO-1	97%	97%	97%	3
CO-2	97%	97%	97%	3
CO-3	97%	97%	97%	3
CO-4				
CO-5				
CO-6				

Attainment (Internal 1 Examination) = 3

Attainment	Level
1	40%
2	50%
3	60%

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLO

Department of Humanities and Sciences

Course Outcome Attainment (Internal Examination-2)

Name of the faculty :	K.MOUNIKA	Academic Year:	2022-23
Branch & Section:	AI&DS	Examination:	INTERNAL II
Lab Course Name:	ENGINEERING CHEMISTRY	Year/semester	I/II

S.No	HT No.	R+O+A	V+V	E+E+R	ppt
Max. Marks ==>		10	10	10	10
1	22X31A7201	8	8	10	10
2	22X31A7202	8	6	8	10
3	22X31A7203	10	7	10	10
4	22X31A7204	7	5	10	10
5	22X31A7205	7	5	10	10
6	22X31A7206	7	5	10	10
7	22X31A7207	7	6	10	10
8	22X31A7208	8	6	10	10
9	22X31A7209	7	5	10	10
10	22X31A7210	9	7	10	10
11	22X31A7211	9	6	10	10
12	22X31A7212	8	4	8	10
13	22X31A7213	8	6	10	10
14	22X31A7214	7	4	10	10
15	22X31A7215	9	7	10	10
16	22X31A7216	7	7	10	10
17	22X31A7217	8	7	10	10
18	22X31A7218	7	5	10	10
19	22X31A7219	10	8	10	10
20	22X31A7220	8	7	9	10
21	22X31A7221	8	5	8	10
22	22X31A7222	6	5	10	10
23	22X31A7223	9	8	8	10
24	22X31A7224	9	6	9	10
25	22X31A7225	7	5	10	10
26	22X31A7226	9	8	8	10
27	22X31A7227	9	8	10	10
28	22X31A7228	8	5	7	10
29	22X31A7229	9	6	8	10
30	22X31A7230	8	4	8	10
31	22X31A7231	7	5	8	10
32	22X31A7232	7	5	10	10
33	22X31A7233	10	10	10	10
34	22X31A7234	5	8	8	10
35	22X31A7235	10	10	10	10
36	22X31A7236	9	9	10	10
37	22X31A7237	8	7	10	10
38	22X31A7238	9	7	10	10
39	22X31A7239	10	8	10	10
40	22X31A7240	A	A	A	A
41	22X31A7241	8	6	10	10
42	22X31A7242	10	10	10	10
43	22X31A7243	9	8	10	10
44	22X31A7244	9	7	10	10
45	22X31A7245	8	6	10	10
46	22X31A7246	8	7	10	10
47	22X31A7247	A	A	A	10
48	22X31A7248	10	10	10	10
49	22X31A7249	9	8	10	10
50	22X31A7250	7	8	9	10
51	22X31A7251	8	6	10	10
52	22X31A7252	10	7	10	10
53	22X31A7253	10	10	10	10
54	22X31A7254	10	8	10	10
55	22X31A7255	10	7	10	10
56	22X31A7256	9	5	10	10
57	22X31A7257	10	9	10	10
58	22X31A7258	9	7	10	10
59	22X31A7259	9	8	10	10
60	22X31A7260	9	7	10	10
61	22X31A7261	9	7	10	10
62	22X31A7262	9	8	10	10
63	22X31A7263	9	6	5	10
64	22X31A7264	6	8	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	6.00
Number of students performed above the target	61	47	61	63
Number of students attempted	64	64	64	64
Percentage of students scored more than target	95%	73%	95%	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	95%	73%	95%	95%
CO - 5	95%	73%	95%	95%
CO - 6	95%	73%	95%	95%

CO	Intr nal pr actica	E+E+R	ppt	OveralI	Level
CO-1					
CO-2					
CO-3					
CO-4	84%	95%	95%	92%	3
CO-5	84%	95%	95%	92%	3
CO-6	84%	95%	95%	92%	3
Attainment (Internal 2 Examination) =					3

Attainment	Level
1	40%
2	50%
3	60%

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Humanities and Sciences

Course Outcome Attainment (University Examinations)

Name of the faculty :	K.MOUNIKA	Academic Year:	2022-23
Branch & Section:	AI&DS	Year / Semester:	I/II
Lab Course Name:	ENGINEERING CHEMISTRY		

S.No	Roll Number	Marks Secured	S.No	Roll Number	Marks Secured
1	22X31A7201	56	35	22X31A7235	58
2	22X31A7202	48	36	22X31A7236	52
3	22X31A7203	57	37	22X31A7237	50
4	22X31A7204	50	38	22X31A7238	42
5	22X31A7205	51	39	22X31A7239	48
6	22X31A7206	52	40	22X31A7240	32
7	22X31A7207	58	41	22X31A7241	51
8	22X31A7208	54	42	22X31A7242	58
9	22X31A7209	55	43	22X31A7243	53
10	22X31A7210	53	44	22X31A7244	50
11	22X31A7211	48	45	22X31A7245	52
12	22X31A7212	48	46	22X31A7246	42
13	22X31A7213	48	47	22X31A7247	32
14	22X31A7214	40	48	22X31A7248	54
15	22X31A7215	40	49	22X31A7249	53
16	22X31A7216	46	50	22X31A7250	45
17	22X31A7217	57	51	22X31A7251	50
18	22X31A7218	53	52	22X31A7252	45
19	22X31A7219	56	53	22X31A7253	50
20	22X31A7220	46	54	22X31A7254	48
21	22X31A7221	43	55	22X31A7255	52
22	22X31A7222	55	56	22X31A7256	46
23	22X31A7223	52	57	22X31A7257	58
24	22X31A7224	53	58	22X31A7258	40
25	22X31A7225	50	59	22X31A7259	57
26	22X31A7226	58	60	22X31A7260	52
27	22X31A7227	56	61	22X31A7261	52
28	22X31A7228	49	62	22X31A7262	50
29	22X31A7229	40	63	22X31A7263	32
30	22X31A7230	40	64	22X31A7264	32
31	22X31A7231	40			
32	22X31A7232	40			
33	22X31A7233	57			
34	22X31A7234	41			

Class Average mark	49	Attainment Level	% students
Number of students performed above the target	38	1	40%
Number of successful students	64	2	50%
Percentage of students scored more than target	59%	3	60%
Attainment level	3		

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Humanities and Sciences

Course Outcome Attainment

Name of the faculty	K.MOUNIKA	Academic Year:	2022-23
Branch & Section:	AI&DS	Year / Semester:	I/II
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 & TECHNOLOGY

Department of Humanities and Sciences

Program Outcome Attainment (from Course)

Name of Faculty:	K.MOUNIKA	Academic Year:	2022-23
Branch & Section:	AI& DS	Year / Semester:	I/II
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							

Note : Fill your CO-PO Mapping of your respective labs

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
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)