

ODD SEM-2022-23



Department of Physics

Course Outcomes and COs-POs Mapping

Batch 2022-23

Semester – I

Subject: Applied Physics for CSE Stream		Subject Code: BPHYS102
Course Outcomes		
CO1	Describe the principles of LASERS and Optical fibers and their relevant applications.	
CO2	Discuss the basic principles of the Quantum Mechanics and its application in Quantum Computing.	
CO3	Summarize the essential properties of superconductors and applications in Quantum Computing.	
CO4	Illustrate the application of physics in design and data analysis.	
CO5	Practice working in groups to conduct experiments in physics and perform precise and honest measurements.	

PROGRAM OUTCOMES

- PO1 Engineering knowledge:** An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- 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:** An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4 Conduct investigations of complex Problem:** An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5 Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6 The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7 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.
- PO8 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9 Individual and 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 the society.
- PO11 Project management and finance:** An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12 Life-long learning:** A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY											
FACULTY NAME	Dr. SADASHIVAIAH P J / ARPITHA H S											
BRANCH	CSE	ACADEMIC YEAR						2022-23				
COURSE	B.E	SEMESTER	I	SECTION				A & B				
SUBJECT	APPLIED PHYSICS FOR CSE STREAM						SUBJECT CODE			BPHYS102		
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2										2
CO2	3	3										2
CO3	3	3										2
CO4	3	2	1		1							2
CO5	3	2	1		2			3	3			2
AVERAGE	3	2.4	1		1.5			3	3			2
OVERALL MAPPING OF SUBJECT												2.27

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	74.03	2.22	1.48										1.48
CO2	72.14	2.16	2.16										1.44
CO3	73.79	2.21	2.21										1.47
CO4	72.53	2.17	1.45	0.72		0.72							1.45
CO5	96.48	2.89	1.92	0.96		1.92			2.89	2.89			1.92
AVERAGE	77.79	2.33	1.84	0.84		1.32			2.89	2.89			1.55
FINAL ATTAINMENT LEVEL													1.95


FACULTY


HOD
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Dept. of Physics
S.I.E.T., TUMKUR -6.


PRINCIPAL
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S.I.E.T., TUMKUR

SEM: I	Total Strength		125		Course:		Applied Physics for CSE Stream		BPHYS102		2022-2023																				
SEC: A & B	IA TEST 1			IA TEST 2			IA TEST 3					PRACTICAL COMPONENT (20)	ASSIGNMENT (10M)				SEE MARKS(50)				Total Cos ATTAINMENT					% of Individual CO					
USN	CO2	CO1	TOTAL	CO3	CO1	TOTAL	CO1	CO2	CO2	CO3	CO4	TOTAL	CO5	CO1	CO2	CO3	CO4	CO1	CO2	CO3	CO4	CO1=75	CO2=75	CO3=55	CO4=35	CO5=20	CO1	CO2	CO3	CO4	CO5
1SV22CS001	20	18	38	14	8	22	3	8	15	15	15	56	20	2.5	2.5	2.5	2.5	10.25	10.25	10.25	10.25	41.75	55.75	41.75	27.75	20	55.666667	74.333333	75.909091	79.285714	100
1SV22CS002	12	6	18	0	4	4	0	20	0	0	0	20	18	2.5	2.5	2.5	2.5	1.5	1.5	1.5	1.5	14	36	4	4	18	18.666667	48	7.272727	11.428571	90
1SV22CS003	3	0	3	9	0	9	20	5	20	13	12	70	19	2.5	2.5	2.5	2.5	5.25	5.25	5.25	5.25	27.75	35.75	29.75	19.75	19	37	47.666667	54.09091	56.428571	95
1SV22CS004	13	8	21	9	14	23	20	17	20	20	20	97	19	2.5	2.5	2.5	2.5	8.25	8.25	8.25	8.25	52.75	60.75	39.75	30.75	19	70.333333	81	72.7273	87.5714	95
1SV22CS005	2	14	16	12	6	18	19	0	20	20	12	71	19	2.5	2.5	2.5	2.5	4.5	4.5	4.5	4.5	46	29	39	19	19	61.333333	38.666667	70.909091	54.285714	95
1SV22CS006	18	10	28	19	10	29	7	10	11	17	15	60	20	2.5	2.5	2.5	2.5	6.5	6.5	6.5	6.5	36	48	45	24	20	48	64	81.81818	68.57143	100
1SV22CS007	8	12	20	20	19	39	20	20	20	20	20	100	20	2.5	2.5	2.5	2.5	9.75	9.75	9.75	9.75	63.25	60.25	52.25	32.25	20	84.333333	80.333333	95	92.14286	100
1SV22CS008	17	20	37	19	11	30	18	13	19	20	17	87	20	2.5	2.5	2.5	2.5	9.5	9.5	9.5	9.5	61	61	51	29	20	81.333333	81.333333	92.72727	82.85714	100
1SV22CS009	20	20	40	20	20	40	20	20	20	20	18	98	20	2.5	2.5	2.5	2.5	8.5	8.5	8.5	8.5	71	71	51	29	20	94.666667	94.666667	92.72727	82.85714	100
1SV22CS010	20	20	40	20	20	40	20	20	20	20	20	100	20	2.5	2.5	2.5	2.5	11.25	11.25	11.25	11.25	73.75	73.75	53.75	33.75	20	98.333333	98.333333	97.72727	96.42857	100
1SV22CS011	18	18	36	17	18	35	18	20	12	20	19	89	19	2.5	2.5	2.5	2.5	10.5	10.5	10.5	10.5	67	63	50	32	19	89.333333	84	90.909091	91.42857	95
1SV22CS012	20	20	40	20	17	37	17	20	20	20	20	97	20	2.5	2.5	2.5	2.5	10.25	10.25	10.25	10.25	66.75	72.75	52.75	32.75	20	89	97	95.909091	93.57143	100
1SV22CS013	0	12	12	12	4	16	20	19	20	19	10	88	20	2.5	2.5	2.5	2.5	8.5	8.5	8.5	8.5	47	50	42	21	20	62.666667	66.666667	76.36364	60	100
1SV22CS014	18	20	38	20	20	40	20	20	20	20	20	100	20	2.5	2.5	2.5	2.5	11	11	11	11	73.5	71.5	53.5	33.5	20	98	95.333333	97.27273	95.71429	100
1SV22CS015	12	20	32	18	10	28	20	20	20	20	20	100	20	2.5	2.5	2.5	2.5	9	9	9	9	61.5	63.5	49.5	31.5	20	82	84.666667	90	90	100
1SV22CS016	15	17	32	14	13	27	20	20	20	20	20	100	20	2.5	2.5	2.5	2.5	9.75	9.75	9.75	9.75	62.25	67.25	46.25	32.25	20	83	89.666667	84.09091	92.14286	95
1SV22CS017	17	16	33	18	9	27	20	20	20	20	20	100	19	2.5	2.5	2.5	2.5	10.5	10.5	10.5	10.5	58	70	51	33	19	77.333333	93.333333	92.72727	94.28571	95
1SV22CS018	16	12	28	18	19	37	20	20	20	20	20	100	19	2.5	2.5	2.5	2.5	9.75	9.75	9.75	9.75	63.25	68.25	50.25	32.25	19	84.333333	91	91.36364	92.14286	95
1SV22CS019	20	18	38	16	17	33	20	20	20	20	20	100	19	2.5	2.5	2.5	2.5	10.5	10.5	10.5	10.5	68	73	49	33	19	90.666667	97.333333	89.09091	94.28571	95
1SV22CS020	10	14	24			A	12	13	20	5	0	50	19	2.5	2.5	2.5	2.5	4.5	4.5	4.5	4.5	33	50	12	7	19	44	66.66667	21.81818	20	95
1SV22CS021	9	12	21	5	3	8	20	4	20	6	2	52	20	2.5	2.5	2.5	2.5	6.25	6.25	6.25	6.25	43.75	41.75	19.75	10.75	20	58.333333	55.666667	35.909091	30.71429	20
1SV22CS022	1	5	6	4	0	4	0	0	7	2	0	9	18	2.5	2.5	2.5	2.5	4.5	4.5	4.5	4.5	12	15	13	7	18	16	20	23.63636	20	90
1SV22CS023	7	12	19	13	5	18	19	11	20	17	16	83	20	2.5	2.5	2.5	2.5	6.5	6.5	6.5	6.5	45	47	39	25	20	60	62.66667	70.909091	71.42857	100
1SV22CS024	5	11	16	12	3	15	7	8	15	15	15	60	20	2.5	2.5	2.5	2.5	7	7	7	7	30.5	37.5	36.5	24.5	20	40.666667	50	66.36364	70	100
1SV22CS025	8	18	26	13	4	17	18	15	20	19	13	83	19	2.5	2.5	2.5	2.5	5	5	5	5	47.5	50.5	39.5	20.5	19	63.333333	67.333333	71.81818	58.57143	95
1SV22CS026	4	11	15	14	13	27	20	0	20	20	11	71	19	2.5	2.5	2.5	2.5	6	6	6	6	52.5	32.5	42.5	19.5	19	70	43.333333	77.27273	55.71429	95
1SV22CS027	9	18	27	12	13	25	20	20	20	20	20	100	19	2.5	2.5	2.5	2.5	9.5	9.5	9.5	9.5	63	61	44	32	19	84	81.333333	80	91.42857	95
1SV22CS028	18	19	37	13	20	33	20	20	20	20	20	100	20	2.5	2.5	2.5	2.5	8.75	8.75	8.75	8.75	70.25	69.25	44.25	31.25	20	93.666667	92.333333	80.45455	89.28571	100
1SV22CS029	2	15	17	11	12	23	14	4	16	16	12	62	20	2.5	2.5	2.5	2.5	6.5	6.5	6.5	6.5	50	31	36	21	20	66.666667	41.333333	65.45455	60	100
1SV22CS030	15	20	33	18	18	36	20	20	20	20	20	100	20	2.5	2.5	2.5	2.5	7.75	7.75	7.75	7.75	68.25	65.25	48.25	30.25	20	91	87	87.27272	86.42857	100
1SV22CS031	12	16	28	20	18	38	20	17	20	20	20	97	20	2.5	2.5	2.5	2.5	10.5	10.5	10.5	10.5	67	62	53	33	20	89.333333	82.666667	96.36364	94.28571	100
1SV22CS032	20	20	40	20	20	40	19	20	20	20	20	99	20	2.5	2.5	2.5	2.5	9	9	9	9	70.5	71.5	51.5	31.5	20	94	95.333333	93.63636	90	100
1SV22CS033	20	20	40	20	20	40	19	20	20	20	19	98	20	2.5	2.5	2.5	2.5	10	10	10	10	71.5	72.5	52.5	31.5	20	95.333333	96.666667	95.45455	90	100
1SV22CS034			A	12	10	22	20	20	20	20	17	97	20	2.5	2.5	2.5	2.5	4.75	4.75	4.75	4.75	37.25	47.25	39.25	24.25	20	49.666667	63	71.36364	69.28571	100
1SV22CS035	23	19	39	18	19	37	20	20	20	20	20	100	20	2.5	2.5	2.5	2.5	8	8	8	8	68.5	73.5	48.5	30.5	20	91.333333	93	88.18182	87.14286	100
1SV22CS036	9	20	29	13	13	26	20	16	20	20	20	96	20	2.5	2.5	2.5	2.5	8.25	8.25	8.25	8.25	63.75	55.75	43.75	30.75	20	85	74.333333	79.54545	87.57143	100
1SV22CS037	11	20	31	20	13	33	19	20	20	20	20	99	19	2.5	2.5	2.5	2.5	5.25	5.25	5.25	5.25	59.75	58.75	47.75	27.75	19	79.666667	78.333333	86.81818	79.28571	95
1SV22CS038	11	16	27	12	15	27						A	17	2.5	2.5	2.5	2.5	8.5	8.5	8.5	8.5	42	22	23	11	17	56	29.333333	41.81818	31.42857	85
1SV22CS039	20	19	39	14	19	33	20	20	20	18	18	96	20	2.5	2.5	2.5	2.5	10.5	10.5	10.5	10.5	71	71	51	31	20	94.666667	97.333333	81.81818	88.57143	100
1SV22CS040	11	17	28	16	14	30	10	15	10	16	8	59	20	2.5	2.5	2.5	2.5	11.5	11.5	11.5	11.5	55	50	46	22	20	73.333333	66.666667	83.63636	62.85714	100
1SV22CS041	19	18	37	12	13	25	20	20	20	20	20	100	20	2.5	2.5	2.5	2.5	9	9	9	9	62.5	70.5	43.5	31.5	20	83.333333	94	82.72727	92.85714	95
1SV22CS042	18	19	37	14	9	25	18	18	20	16	18	90	20	2.5	2.5	2.5	2.5	7.75	7.75	7.75	7.75	56.25	66.25	40.25	28.25	20	75	88.333333	73.18182	80.71429	100
1SV22CS043	19	19	38	12	19	31	20	18	20	20	19	97	19	2.5	2.5	2.5	2.5	11	11	11	11	71.5	70.5	45.5	32.5	19	95.333333	90.45455	96.42857	100	
1SV22CS044	20	19	39	20	20	40	20	20	20	16	20	96	20	2.5	2.5	2.5	2.5	11.25	11.25	11.25	11.25	72.75	73.75	49.75	33.75	20	97	98.333333	90.454		

15V22CS073	8	13	21	7	8	15	10	5	18	8	18	59	18	2.5	2.5	2.5	2.5	2.5	8.25	8.25	8.25	8.25	41.75	41.75	25.75	28.75	18	55.666667	55.66667	46.81818	82.14286	90
15V22CS074	12	20	32	19	16	35	20	16	20	20	20	96	20	2.5	2.5	2.5	2.5	2.5	9.25	9.25	9.25	9.25	67.75	59.75	50.75	31.75	20	90.333333	79.66667	92.27273	90.71429	100
15V22CS075	8	6	14	8	9	17	19	17	19	19	15	89	20	2.5	2.5	2.5	2.5	2.5	6.5	6.5	6.5	6.5	43	53	36	24	20	57.333333	70.66667	65.45455	68.57143	100
15V22CS076	11	20	31	20	17	37	18	17	19	18	20	92	19	2.5	2.5	2.5	2.5	2.5	8.25	8.25	8.25	8.25	65.75	57.75	48.75	30.75	19	87.666667	77	88.63636	87.85714	95
15V22CS077	3	8	11	8	8	16	6	6	18	8	0	38	14	2.5	2.5	2.5	2.5	2.5	3.5	3.5	3.5	3.5	28	33	22	6	14	37.333333	44	40	17.14286	70
15V22CS078	17	20	37	19	18	37	20	20	20	18	20	98	19	2.5	2.5	2.5	2.5	2.5	10	10	10	10	70.5	69.5	49.5	32.5	19	94	92.66667	90	92.85714	95
15V22CS079	20	18	38	17	20	37	20	20	20	20	20	100	20	2.5	2.5	2.5	2.5	2.5	12.25	12.25	12.25	12.25	72.75	74.75	51.75	34.75	20	97	99.66667	94.09091	99.28571	100
15V22CS080	3	12	15	13	11	24	13	11	17	20	19	80	19	2.5	2.5	2.5	2.5	2.5	8.5	8.5	8.5	8.5	47	42	44	30	19	62.66667	66	80	85.71429	95
15V22CS081	16	16	32	10	17	27	20	13	20	20	19	92	20	2.5	2.5	2.5	2.5	2.5	8.75	8.75	8.75	8.75	64.25	60.25	41.25	30.25	20	85.666667	80.33333	75	86.42857	100
15V22CS082	4	17	21	6	17	23	20	19	18	20	20	97	20	2.5	2.5	2.5	2.5	2.5	8	8	8	8	64.5	51.5	36.5	30.5	20	86	68.66667	66.36364	87.14286	100
15V22CS083	12	20	32	11	13	24	19	17	20	18	20	94	20	2.5	2.5	2.5	2.5	2.5	7.5	7.5	7.5	7.5	62	59	39	30	20	82.666667	78.66667	70.90909	85.71429	100
15V22CS084	8	14	22	12	9	21	9	10	6	18	14	57	19	2.5	2.5	2.5	2.5	2.5	6.75	6.75	6.75	6.75	41.25	33.25	39.25	23.25	19	55	44.33333	71.36364	66.42857	95
15V22CS085	7	17	24	7	13	20	19	16	15	20	19	89	20	2.5	2.5	2.5	2.5	2.5	9	9	9	9	60.5	49.5	38.5	30.5	20	80.666667	66	70	87.14286	100
15V22CS086	20	20	40	19	20	39	20	20	20	20	20	100	20	2.5	2.5	2.5	2.5	2.5	11.25	11.25	11.25	11.25	73.75	73.75	52.75	33.75	20	98.33333	98.33333	95.90909	96.42857	100
15V22CS087	8	18	26	15	19	34	15	4	5	18	15	57	19	2.5	2.5	2.5	2.5	2.5	9.5	9.5	9.5	9.5	64	29	45	27	19	85.33333	38.66667	81.81818	77.14286	95
15V22CS088	5	6	11	10	10	20	20	20	20	5	5	70	19	2.5	2.5	2.5	2.5	2.5	8.5	8.5	8.5	8.5	47	56	26	16	19	62.666667	74.66667	47.27273	45.71429	100
15V22CS089	7	17	24	6	13	19	12	14	10	20	12	68	20	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5	4.5	49	38	33	19	20	65.33333	50.66667	60	54.28571	95
15V22CS090	7	11	18	6	14	20	11	0	0	0	0	11	19	2.5	2.5	2.5	2.5	2.5	3.25	3.25	3.25	3.25	41.75	12.75	11.75	5.75	19	55.666667	17	21.36364	16.42857	95
15V22CS091	2	15	17	19	17	36	20	17	17	20	20	94	20	2.5	2.5	2.5	2.5	2.5	7.25	7.25	7.25	7.25	61.75	45.75	48.75	29.75	20	82.33333	61	88.63636	85	100
15V22CS092	12	20	32	20	17	37	18	20	20	19	17	94	20	2.5	2.5	2.5	2.5	2.5	10.75	10.75	10.75	10.75	68.25	65.25	52.25	30.25	20	91	87	95	86.42857	100
15V22CS093	4	15	19	13	15	28						A	19	2.5	2.5	2.5	2.5	2.5	7.25	7.25	7.25	7.25	39.75	13.75	22.75	9.75	19	53	18.33333	41.36364	27.85714	95
15V22CS094	6	10	16	8	15	23	19	10	20	17	10	76	19	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5	4.5	51	43	32	17	19	68	57.33333	58.18182	48.57143	95
15V22CS095	19	13	32	10	15	25	19	20	20	20	20	99	20	2.5	2.5	2.5	2.5	2.5	9.25	9.25	9.25	9.25	58.75	70.75	41.75	31.75	20	78.33333	94.33333	75.90909	90.71429	100
15V22CS096	4	12	16	13	9	21	11	5	20	7	13	46	19	2.5	2.5	2.5	2.5	2.5	5.5	5.5	5.5	5.5	40	37	28	21	19	53.33333	49.33333	50.90909	60	95
15V22CS097	3	20	23	10	17	27	18	18	20	19	20	95	20	2.5	2.5	2.5	2.5	2.5	6.25	6.25	6.25	6.25	63.75	49.75	37.75	28.75	20	85	66.33333	68.63636	82.14286	100
15V22CS098	17	19	36	20	17	37	19	18	20	20	20	97	20	2.5	2.5	2.5	2.5	2.5	10.25	10.25	10.25	10.25	67.75	67.75	52.75	32.75	20	90.33333	90.33333	95.90909	93.57143	100
15V22CS099	5	10	15	11	12	23	20	20	20	5	5	80	18	2.5	2.5	2.5	2.5	2.5	2.75	2.75	2.75	2.75	47.25	50.25	21.25	10.25	18	63	37	38.63636	29.28571	90
15V22CS100	14	12	26	12	13	25						A	20	2.5	2.5	2.5	2.5	2.5	5.75	5.75	5.75	5.75	33.25	22.25	20.25	8.25	20	44.33333	29.66667	36.81818	23.57143	100
15V22CS101	10	18	28	18	17	35	19	18	20	18	20	95	20	2.5	2.5	2.5	2.5	2.5	8.25	8.25	8.25	8.25	64.75	58.75	46.75	30.75	20	86.33333	78.33333	85	87.85714	100
15V22CS102	12	20	32	20	20	40	19	19	20	20	20	98	20	2.5	2.5	2.5	2.5	2.5	11	11	11	11	72.5	64.5	53.5	33.5	20	96.666667	86	97.27273	95.71429	100
15V22CS103	12	20	32	12	20	32	20	20	20	20	20	100	20	2.5	2.5	2.5	2.5	2.5	9	9	9	9	71.5	63.5	43.5	31.5	20	95.33333	84.66667	79.09091	90	100
15V22CS104	20	20	40	20	20	40	20	19	20	20	20	99	20	2.5	2.5	2.5	2.5	2.5	11	11	11	11	73.5	72.5	53.5	33.5	20	98	96.66667	97.27273	95.71429	100
15V22CS105	18	15	33	14	17	31	19	16	17	20	17	89	20	2.5	2.5	2.5	2.5	2.5	9	9	9	9	62.5	62.5	45.5	28.5	20	83.33333	83.33333	82.72727	81.42857	100
15V22CS106	0	18	18	4	3	7						A	18	2.5	2.5	2.5	2.5	2.5	4.5	4.5	4.5	4.5	28	7	11	7	18	37.33333	9.33333	20	20	90
15V22CS107	18	19	37	19	20	39	19	20	20	20	20	99	20	2.5	2.5	2.5	2.5	2.5	9.5	9.5	9.5	9.5	70	70	51	32	20	93.33333	93.33333	92.72727	91.42857	100
15V22CS108	20	18	38	20	20	40	19	17	18	20	20	94	20	2.5	2.5	2.5	2.5	2.5	10	10	10	10	69.5	67.5	52.5	32.5	20	92.666667	90	95.45455	92.85714	100
15V22CS109	9	8	17	11	11	22	17	17	20	20	15	89	20	2.5	2.5	2.5	2.5	2.5	8.25	8.25	8.25	8.25	46.75	56.75	41.75	25.75	20	62.33333	75.66667	75.90909	73.57143	100
15V22CS110	14	16	30	10	15	25	20	20	17	20	20	97	20	2.5	2.5	2.5	2.5	2.5	8	8	8	8	61.5	61.5	40.5	30.5	20	82	82	73.63636	87.14286	100
15V22CS111	5	16	21	6	16	22	19	9	19	11	12	70	19	2.5	2.5	2.5	2.5	2.5	6.5	6.5	6.5	6.5	40	40	26	9	19	53.33333	53.33333	47.27273	25.71429	95
15V22CS112	4	7	11	6	10	16	14	14	13	11	0	52	19	2.5	2.5	2.5	2.5	2.5	3.75	3.75	3.75	3.75	39.25	46.25	36.25	26.25	20	52.33333	61.66667	65.90909	75	100
15V22CS113	9	16	25	15	10	25	7	16	15	15	20	73	20	2.5	2.5	2.5	2.5	2.5	3.75	3.75	3.75	3.75	45.5	50.5	35.5	29.5	20	60.666667	67.33333	64.54545	84.28571	100
15V22CS114	7	13	20	8	5	13	18	14	20	18	20	90	20	2.5	2.5	2.5	2.5	2.5	7	7	7	7	60.5	42.5	26.5	21.5	19	80.666667	56.66667	48.18182	61.42857	95
15V22CS115	4	11	15	19	15	34	19	20	20	16	20	95	18	2.5	2.5	2.5	2.5	2.5	7.5	7.5	7.5	7.5	55	54	45	30	18	73.33333	72	81.81818	85.71429	90
15V22CS116	4	7	11	11	1	12	14	12	4	14	10	54	15	2.5	2.5	2.5	2.5	2.5	4.75	4.75	4.75	4.75	29.25	27.25	32.25	17.25	15	39	36.33333	58.63636	49.28571	75
15V22CS117	7	17	24	15	10	25	19	18	20	20	13	90	20	2.5	2.5	2.5	2.5	2.5	8.75	8.75												



Department of Physics

Course Outcomes and COs-POs Mapping

Batch 2022-23

Semester – I

Subject: Applied Physics for CV Stream		Subject Code: BPHYC102
Course Outcomes		
CO1	Elucidate the concepts in oscillations, waves, elasticity and material failures	
CO2	Summarize concepts of acoustics in buildings and explain the concepts in radiation and photometry.	
CO3	Discuss the principles photonic devices and their application relevant to civil engineering.	
CO4	Describe the various natural hazards and safety precautions.	
CO5	Practice working in groups to conduct experiments in physics and perform precise and honest measurements.	

PROGRAM OUTCOMES

- PO1 Engineering knowledge:** An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- 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:** An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4 Conduct investigations of complex Problem:** An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5 Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6 The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7 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.
- PO8 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9 Individual and 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 the society.
- PO11 Project management and finance:** An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12 Life-long learning:** A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY											
FACULTY NAME	Dr. SADASHIVAIAH P J / ARPITHA H S											
BRANCH	CV	ACADEMIC YEAR							2022-23			
COURSE	B.E	SEMESTER	I	SECTION				C				
SUBJECT	APPLIED PHYSICS FOR CV STREAM						SUBJECT CODE			BPHY102		
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2			1							2
CO2	3	2										2
CO3	3	2										2
CO4	3	3					1					2
CO5	3	2	1		2			3	3			2
AVERAGE	3	2.2	1		1.5		1	3	3			2
OVERALL MAPPING OF SUBJECT												2.09

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	75.89	2.28	1.52			0.76							1.52
CO2	70.59	2.11	1.41										1.41
CO3	70.28	2.10	1.40										1.40
CO4	66.74	2.00	2.00					0.67					1.21
CO5	94.72	2.84	1.89	0.94		1.89			2.84	2.84			1.89
AVERAGE	75.64	2.27	1.66	0.75		1.13		0.75	2.27	2.27			1.51
FINAL ATTAINMENT LEVEL													1.58


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S.I.E.T., TUMKUR -6


PRINCIPAL
S.I.E.T. TUMKUR

EVEN SEM-2022-23



Department of Physics

Course Outcomes and COs-POs Mapping

Batch 2022-23

Semester – II

Subject: Applied Physics for CSE Stream		Subject Code: BPHYS202
Course Outcomes		
CO1	Describe the principles of LASERS and Optical fibers and their relevant applications.	
CO2	Discuss the basic principles of the Quantum Mechanics and its application in Quantum Computing.	
CO3	Summarize the essential properties of superconductors and applications in Quantum Computing.	
CO4	Illustrate the application of physics in design and data analysis.	
CO5	Practice working in groups to conduct experiments in physics and perform precise and honest measurements.	

PROGRAM OUTCOMES

- PO1 Engineering knowledge:** An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- 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:** An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4 Conduct investigations of complex Problem:** An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5 Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6 The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7 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.
- PO8 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9 Individual and 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 the society.
- PO11 Project management and finance:** An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12 Life-long learning:** A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY											
FACULTY NAME	Dr. SADASHIVAIAH P J											
BRANCH	ISE & AIDS			ACADEMIC YEAR				2022-23				
COURSE	B.E	SEMESTER			II	SECTION			D & E			
SUBJECT	APPLIED PHYSICS FOR CSE STREAM						SUBJECT CODE		BPHYS202			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2										2
CO2	3	3										2
CO3	3	3										2
CO4	3	2	1		1							2
CO5	3	2	1		2			3	3			2
AVERAGE	3	2.4	1		1.5			3	3			2
OVERALL MAPPING OF SUBJECT												2.27

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	56.57	1.69	1.13										1.13
CO2	43.68	1.31	1.31										0.87
CO3	71.81	2.15	2.15										1.44
CO4	71.41	2.14	1.42	0.71		0.71							1.43
CO5	91.89	2.76	1.83	0.92		1.83			2.76	2.76			1.84
AVERAGE	67.07	2.01	1.57	0.82		1.27			2.76	2.76			1.34
FINAL ATTAINMENT LEVEL													1.79


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SEM: II		Total Strength			111			Course:			Applied Physics for CSE Stream			BPHYS202			2022-2023															
SEC: D & E		IA TEST 1			IA TEST 2			IA TEST 3			PRACTICAL COMPONENT (25)	ASSIGNMENT (10M)				SEE MARKS(50)				Total Cos ATTAINMENT					% of Individual CO							
USN	CO2	CO1	TOTAL	CO3	CO1	TOTAL	CO1	CO2	CO2	CO3	CO4	TOTAL	CO5	CO1	CO2	CO3	CO4	CO1	CO2	CO3	CO4	CO1=75	CO2=75	CO3=55	CO4=35	CO5=25	CO1	CO2	CO3	CO4	CO5	
15V22IS001	18	16	34	20	20	40				20	20	60	24	2.5	2.5	2.5	2.5	8.75	8.75	8.75	8.75	47.25	49.25	51.25	31.25	24	63	65.66667	93.18182	89.28571	96	
15V22IS002	9	10	19	17	11	28				15	20	54	20	2.5	2.5	2.5	2.5	6.75	6.75	6.75	6.75	30.25	33.25	45.25	29.25	20	40.33333	44.33333	82.27273	83.57143	80	
15V22IS003	18	19	37	18	20	38				19	20	46	25	2.5	2.5	2.5	2.5	9	9	9	9	50.5	48.5	36.5	31.5	25	67.33333	64.66667	66.36364	90	100	
15V22IS004	17	16	33	20	18	38				20	20	60	25	2.5	2.5	2.5	2.5	10.25	10.25	10.25	10.25	46.75	49.75	52.75	32.75	25	62.33333	66.33333	95.90909	93.57143	100	
15V22IS005		A	15	6	21					11	18	41	22	2.5	2.5	2.5	2.5	6.5	6.5	6.5	6.5	15	20	42	21.75	22	20	26.66667	76.36364	60	88	
15V22IS006	18	10	28	13	6	19				7	11	30	16	2.5	2.5	2.5	2.5	6.25	6.25	6.25	6.25	31.75	26.75	32.75	20.75	16	42.33333	35.66667	59.54545	59.28571	64	
15V22IS007	9	9	18	14	14	28				20	8	35	16	2.5	2.5	2.5	2.5	7.25	7.25	7.25	7.25	32.75	38.75	31.75	16.75	16	43.66667	51.66667	57.72727	47.85714	64	
15V22IS008	10	15	25	14	13	27				11	7	38	24	2.5	2.5	2.5	2.5	9.25	9.25	9.25	9.25	50.75	21.75	32.75	31.75	24	67.66667	29	59.54545	90.71429	96	
15V22IS009	15	9	24	19	20	39				20	18	54	24	2.5	2.5	2.5	2.5	8.25	8.25	8.25	8.25	39.75	45.75	47.75	26.75	24	53	61	86.81818	76.42857	96	
15V22IS010	20	17	37	20	20	40				20	20	60	25	2.5	2.5	2.5	2.5	7.5	7.5	7.5	7.5	47	50	50	30	25	62.66667	66.66667	90.90909	85.71429	100	
15V22IS011	20	20	40	20	20	40				20	20	60	25	2.5	2.5	2.5	2.5	9.25	9.25	9.25	9.25	51.75	51.75	51.75	31.75	25	69	69	94.09091	90.71429	100	
15V22IS012	18	16	34	15	19	34				20	19	59	24	2.5	2.5	2.5	2.5	8.5	8.5	8.5	8.5	46	49	45	31	24	61.33333	65.33333	81.81818	88.57143	96	
15V22IS013	7	8	15	14	18	32				20	18	56	25	2.5	2.5	2.5	2.5	4.5	4.5	4.5	4.5	33	34	39	25	25	44	45.33333	70.90909	71.42857	100	
15V22IS014	11	9	20	13	14	27				7	9	29	25	2.5	2.5	2.5	2.5	5	5	5	5	37.5	18.5	29.5	20.5	25	50	24.66667	53.63636	58.57143	100	
15V22IS015	20	16	36	12	14	26				15	19	54	25	2.5	2.5	2.5	2.5	9.75	9.75	9.75	9.75	57.25	32.25	43.25	32.25	25	76.33333	43	78.63636	92.14286	100	
15V22IS016	7	8	15	3	4	7				5	7	20	23	2.5	2.5	2.5	2.5	4.5	4.5	4.5	4.5	24	14	17	27	23	32	18.66667	30.90909	77.14286	92	
15V22IS017	20	15	35	20	12	32				20	4	15	39	25	2.5	2.5	2.5	2.5	9	9	9	9	38.5	51.5	35.5	26.5	25	51.33333	68.66667	64.54545	75.71429	100
15V22IS018	20	20	40	20	19	39				20	20	60	25	2.5	2.5	2.5	2.5	10.5	10.5	10.5	10.5	52	53	53	33	25	69.33333	70.66667	96.36364	94.28571	100	
15V22IS019	14	16	30	18	15	33				14	20	54	22	2.5	2.5	2.5	2.5	10	10	10	10	57.5	26.5	50.5	32.5	22	76.66667	35.33333	91.81818	92.85714	88	
15V22IS020	20	20	40	15	19	34				18	16	54	22	2.5	2.5	2.5	2.5	7.75	7.75	7.75	7.75	67.25	30.25	41.25	30.25	22	89.66667	40.33333	75	86.42857	88	
15V22IS021	20	16	36	19	20	39				20	19	59	25	2.5	2.5	2.5	2.5	11	11	11	11	49.5	53.5	51.5	33.5	25	66	71.33333	93.63636	95.71429	100	
15V22IS022	12	18	30	15	18	33				17	17	53	25	2.5	2.5	2.5	2.5	8.75	8.75	8.75	8.75	47.25	40.25	43.25	30.25	25	63	53.66667	78.63636	86.42857	100	
15V22IS023	15	19	34	15	20	35				20	19	59	25	2.5	2.5	2.5	2.5	9.75	9.75	9.75	9.75	51.25	47.25	46.25	32.25	25	68.33333	63	84.09091	92.14286	100	
15V22IS024	10	16	26	15	20	35				14	16	50	25	2.5	2.5	2.5	2.5	8.75	8.75	8.75	8.75	47.25	47.25	42.25	31.25	25	63	47	76.81818	89.28571	100	
15V22IS025	17	14	31	20	20	40				20	13	20	24	2.5	2.5	2.5	2.5	9.25	9.25	9.25	9.25	45.75	48.75	44.75	31.75	24	61	65	81.36364	90.71429	96	
15V22IS026	14	15	29	18	15	33				6	13	33	24	2.5	2.5	2.5	2.5	10.25	10.25	10.25	10.25	42.75	32.75	43.75	26.75	24	57	43.66667	79.54545	76.42857	96	
15V22IS027	11	14	25	15	9	24				20	15	32	24	2.5	2.5	2.5	2.5	7.5	7.5	7.5	7.5	33	41	40	27	24	44	54.66667	72.72727	77.14286	96	
15V22IS028	18	14	32	18	19	37				11	20	51	24	2.5	2.5	2.5	2.5	7.5	7.5	7.5	7.5	43	39	48	30	24	57.33333	52	87.27273	85.71429	96	
15V22IS029	10	12	22	9	15	24				12	20	32	24	2.5	2.5	2.5	2.5	4.5	4.5	4.5	4.5	46	17	36	25	24	61.33333	22.66667	65.45455	71.42857	96	
15V22IS030	10	16	26	12	15	27				12	20	32	24	2.5	2.5	2.5	2.5	6	6	6	6	51.5	18.5	40.5	28.5	24	68.66667	24.66667	73.63636	81.42857	96	
15V22IS031	18	17	35	16	15	31				19	20	59	24	2.5	2.5	2.5	2.5	7	7	7	7	60.5	27.5	45.5	29.5	24	80.66667	36.66667	82.72727	84.28571	96	
15V22IS032	20	20	40	20	20	40				20	20	60	24	2.5	2.5	2.5	2.5	12.25	12.25	12.25	12.25	74.75	34.75	54.75	34.75	24	99.66667	46.33333	99.54545	99.28571	96	
15V22IS033	19	20	39	20	20	40				20	20	60	25	2.5	2.5	2.5	2.5	9.5	9.5	9.5	9.5	72	31	52	32	25	96	41.33333	94.54545	91.42857	100	
15V22IS034	6	10	16	12	14	26				12	11	33	24	2.5	2.5	2.5	2.5	4.75	4.75	4.75	4.75	31.25	25.25	30.25	17.25	24	41.66667	33.66667	55	49.28571	96	
15V22IS035	20	20	40	20	16	36				20	20	60	24	2.5	2.5	2.5	2.5	10.75	10.75	10.75	10.75	69.25	33.25	53.25	33.25	24	92.33333	44.33333	96.81818	95	96	
15V22IS036	9	7	16	18	16	34				17	19	54	21	2.5	2.5	2.5	2.5	5.75	5.75	5.75	5.75	48.25	17.25	45.25	26.25	21	64.33333	23	82.27273	75	84	
15V22IS038	20	20	40	20	20	40				18	20	58	25	2.5	2.5	2.5	2.5	7.25	7.25	7.25	7.25	67.75	29.75	49.75	29.75	25	90.33333	39.66667	90.45455	85	100	
15V22IS039	20	16	36	12	17	29				20	20	60	25	2.5	2.5	2.5	2.5	8.5	8.5	8.5	8.5	64	31	43	21	25	85.33333	41.33333	78.18182	60	100	
15V22IS040	13	16	29		A	11				11	13	26	16	2.5	2.5	2.5	2.5	5.5	5.5	5.5	5.5	35	21	28	22	16	46.66667	28	50.90909	62.85714	64	
15V22IS041	7	8	15	9	6	15				13	13	26	16	2.5	2.5	2.5	2.5	3.75	3.75	3.75	3.75	33.25	13.25	28.25	26.25	16	44.33333	17.66667	51.36364	75	96	
15V22IS042	12	12	24	14	11	25				9	8	17	34	24	2.5	2.5	2.5	2.5	6	6	6	6	31.5	29.5	30.5	25.5	24	42	39.33333	55.45455	72.85714	96
15V22IS043	20	19	39	20	18	38				12	15	20	47	25	2.5	2.5	2.5	2.5	9.5	9.5	9.5	9.5	61	32	47	32	25	81.33333	42.66667	85.45455	91.42857	100
15V22IS044	19	18	37	20	18	38				18	20	58	24	2.5	2.5	2.5	2.5	8.75	8.75	8.75	8.75	47.25	48.25	51.25	29.25	24	63	64.33333	93.18182	83.57143	96	
15V22IS045	19	17	36	18	13	31				17	20	57	24	2.5	2.5	2.5	2.5	6.25	6.25	6.25	6.25	38.75	44.75	46.75	28.75	24	51.66667	59.66667	85	82.14286	96	
15V22IS046	14	15	29	17	14	31				13	16	20	49	25	2.5	2.5	2.5	2.5	9.75	9.75	9.75	9.75	54.25	26.25	45.25	32.25	25	72.33333	35	82.27273</		



Department of Physics

Course Outcomes and COs-POs Mapping

Batch 2022-23

Semester – II

Subject: Applied Physics for EEE Stream		Subject Code: BPHYE202
Course Outcomes		
CO1	Describe the fundamental principles of the Quantum Mechanics and the essentials of Photonics.	
CO2	Elucidate the concepts of conductors, dielectrics and superconductivity	
CO3	Discuss the fundamentals of vector calculus and their applications in Maxwell's Equations and EM Waves.	
CO4	Summarize the properties of semiconductors and the working principles of semiconductor devices	
CO5	Practice working in groups to conduct experiments in physics and Perform precise and honest measurements	

PROGRAM OUTCOMES

- PO1 Engineering knowledge:** An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and Knowledge.
- 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:** An ability to design solution for engineering problems and design system components or process to meet desired specifications and needs.
- PO4 Conduct investigations of complex Problem:** An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
- PO5 Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities.
- PO6 The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues.
- PO7 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.
- PO8 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9 Individual and 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 the society.
- PO11 Project management and finance:** An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.
- PO12 Life-long learning:** A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

COLLEGE	SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY											
FACULTY NAME	ARPITHA H S											
BRANCH	ECE & EEE			ACADEMIC YEAR				2022-23				
COURSE	B.E	SEMESTER		II		SECTION			F			
SUBJECT	APPLIED PHYSICS FOR EEE STREAM						SUBJECT CODE		BPHYE202			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2										2
CO2	3	2										2
CO3	3	2										2
CO4	3	2			1							2
CO5	3	2	1		2			3	3			2
AVERAGE	3	2	1		1.5			3	3			2
OVERALL MAPPING OF SUBJECT												2.21

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	72.30	2.17	1.46										1.46
CO2	70.21	2.11	1.40										1.40
CO3	70.90	2.13	1.42										1.42
CO4	52.68	1.58	1.05			0.53							1.05
CO5	94.20	2.83	1.88	0.94		1.88			2.83	2.83			1.88
AVERAGE	72.05	2.16	1.44	0.94		1.20			2.83	2.83			1.44
FINAL ATTAINMENT LEVEL													1.83

Arpitha H.S
FACULTY

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HOD
H.O.D
Dept. of Physics
S.I.E.T., TUMKUR -6.

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PRINCIPAL
PRINCIPAL
S.I.E.T. TUMKUR.

SEM: II		Total Strength			51			Course: Physics for EEE Stream						BPHYE202		2022-2023					Total Cos ATTAINMENT					% of Individual CO							
SEC: F	IA TEST 1			IA TEST 2			IA TEST 3						PRACTICAL COMPONENT (25)	ASSIGNMENT (10M)				SEE MARKS(50)				Total Cos ATTAINMENT					% of Individual CO						
USN	CO4	CO2	TOTAL	CO2	CO4	TOTAL	CO4	CO4	CO2	CO1	CO3	TOTAL	COS	CO1	CO2	CO3	CO4	CO1	CO2	CO3	CO4	CO1=35	CO2=75	CO3=35	CO4=95	CO5=25	CO1	CO2	CO3	CO4	CO5		
1SV22EC001	17	9	26	14	13	27	19				16	20	55	19	2.5	2.5	2.5	2.5	5.75	5.75	5.75	5.75	24.25	31.25	28.25	57.25	19	69.285714	41.66667	80.71429	60.26316	76	
1SV22EC002	12	4	16	15	6	21				20	14	11	45	16	2.5	2.5	2.5	2.5	4.5	4.5	4.5	4.5	21	46	18	25	16	60	61.33333	51.42857	26.31579	64	
1SV22EC003	11	18	29	19	19	38				20	20	19	59	25	2.5	2.5	2.5	2.5	6.75	6.75	6.75	6.75	29.25	66.25	28.25	39.25	25	83.571429	88.33333	80.71429	41.31579	100	
1SV22EC004	17	20	37	19	18	37			20		20	20	60	25	2.5	2.5	2.5	2.5	8.5	8.5	8.5	8.5	31	50	31	66	25	88.571429	66.66667	88.57143	69.47368	100	
1SV22EC005	15	18	33	15	8	23			20		20	18	58	24	2.5	2.5	2.5	2.5	7	7	7	7	7	29.5	42.5	27.5	52.5	24	84.285714	56.66667	78.57143	55.26316	96
1SV22EC006	20	20	40	19	20	39					20	20	60	25	2.5	2.5	2.5	2.5	9	9	9	9	9	31.5	70.5	31.5	51.5	25	90	94	90	54.21053	100
1SV22EC007	15	11	26	20	13	33				15	19	15	49	18	2.5	2.5	2.5	2.5	5.75	5.75	5.75	5.75	27.25	54.25	23.25	36.25	18	77.857143	72.33333	66.42857	38.15789	72	
1SV22EC008	11	4	15	19	11	30							A	19	2.5	2.5	2.5	2.5	3.25	3.25	3.25	3.25	5.75	28.75	5.75	27.75	19	16.428571	38.33333	16.42857	29.21053	76	
1SV22EC009	17	20	37	17	14	31				20	20	20	60	25	2.5	2.5	2.5	2.5	6.75	6.75	6.75	6.75	29.25	66.25	29.25	40.25	25	83.571429	88.33333	83.57143	42.36842	100	
1SV22EC010	8	11	19	18	14	32				14	15	13	42	24	2.5	2.5	2.5	2.5	5.25	5.25	5.25	5.25	22.75	50.75	20.75	29.75	24	65	67.66667	59.28571	31.31579	96	
1SV22EC011	19	17	36	18	20	33				20	20	20	60	25	2.5	2.5	2.5	2.5	6.5	6.5	6.5	6.5	29	64	29	48	25	82.857143	85.33333	82.85714	50.52632	100	
1SV22EC012			A	20	20	40				20	14	20	54	21	2.5	2.5	2.5	2.5	5	5	5	5	5	21.5	47.5	27.5	27.5	21	61.428571	63.33333	78.57143	28.94737	84
1SV22EC013	20	20	40	20	19	39				20	20	20	60	25	2.5	2.5	2.5	2.5	8.75	8.75	8.75	8.75	31.25	71.25	31.25	50.25	25	89.285714	88.33333	89.28571	52.89474	100	
1SV22EC014	20	20	40	20	16	36	20					20	19	59	25	2.5	2.5	2.5	2.5	6.75	6.75	6.75	6.75	29.25	49.25	28.25	65.25	25	83.571429	65.66667	80.71429	68.68421	100
1SV22EC015	14	16	30	17	20	37			18		12	20	50	24	2.5	2.5	2.5	2.5	1.75	1.75	1.75	1.75	16.25	37.25	24.25	56.25	24	46.428571	49.66667	69.28571	59.21053	96	
1SV22EC016	11	13	24	20	19	39				19	12	15	46	23	2.5	2.5	2.5	2.5	3.25	3.25	3.25	3.25	12.75	57.75	20.75	35.75	23	50.714286	77	59.28571	37.63158	92	
1SV22EC017	16	17	33	20	20	40				20	20	20	60	25	2.5	2.5	2.5	2.5	10.25	10.25	10.25	10.25	32.75	69.75	32.75	48.75	25	93.571429	93	93.57143	51.31579	100	
1SV22EC018	15	18	33	17	20	37				20	20	20	60	23	2.5	2.5	2.5	2.5	5.25	5.25	5.25	5.25	27.75	62.75	27.75	42.75	23	79.285714	83.66667	79.28571	45	92	
1SV22EC019	20	20	40	19	16	35	20				20	20	60	25	2.5	2.5	2.5	2.5	5.75	5.75	5.75	5.75	28.25	47.25	28.25	64.25	25	80.714286	60.33333	80.71429	68.68421	96	
1SV22EC020	20	19	39	18	17	35	20				20	20	60	24	2.5	2.5	2.5	2.5	5.75	5.75	5.75	5.75	28.25	45.25	28.25	65.25	24	80.714286	60.33333	80.71429	68.68421	96	
1SV22EC021	20	20	40	19	20	39	20				20	20	60	25	2.5	2.5	2.5	2.5	7.5	7.5	7.5	7.5	30	49	30	70	25	85.714286	65.33333	85.71429	73.68421	100	
1SV22EC022	10	18	28	14	20	34			11	14	12	37	24	24	2.5	2.5	2.5	2.5	5.75	5.75	5.75	5.75	22.25	51.25	20.25	38.25	24	63.571429	68.33333	57.85714	40.26316	96	
1SV22EC023	17	18	35	20	17	37			19	20	20		59	24	2.5	2.5	2.5	2.5	9	9	9	9	31.5	69.5	11.5	64.5	24	90	92.66667	32.85714	67.89474	96	
1SV22EC024	13	18	31	19	18	37			14		11	15	40	24	2.5	2.5	2.5	2.5	5.5	5.5	5.5	5.5	19	45	23	53	24	54.285714	60	65.71429	55.78947	96	
1SV22EC025	20	20	40	20	20	40			20		20	19	59	25	2.5	2.5	2.5	2.5	8	8	8	8	30.5	50.5	29.5	70.5	25	87.142857	67.33333	84.28571	74.21053	100	
1SV22EC026	20	13	33	19	20	39			20	0	20	40	60	15	2.5	2.5	2.5	2.5	7.75	7.75	7.75	7.75	10.25	62.25	30.25	50.25	15	29.285714	83	86.42857	68.89474	60	
1SV22EC028	20	20	40	18	12	30	15				20	20	55	25	2.5	2.5	2.5	2.5	4.5	4.5	4.5	4.5	27	45	27	54	25	77.142857	60	77.14286	56.84211	100	
1SV22EC029	19	19	38	17	20	37			20	14	20	54	24	24	2.5	2.5	2.5	2.5	9	9	9	9	25.5	67.5	31.5	50.5	24	72.857143	90	90	53.15789	96	
1SV22EC030	15	14	29	15	9	24	12				19	17	48	23	2.5	2.5	2.5	2.5	6	6	6	6	27.5	37.5	25.5	44.5	23	78.571429	50	72.85714	46.84211	92	
1SV22EC031	20	20	40	20	20	40			20	19	11	50	25	25	2.5	2.5	2.5	2.5	6.75	6.75	6.75	6.75	28.25	49.25	20.25	69.25	24	82.142857	65.66667	57.85714	72.89474	100	
1SV22EC032	20	20	40	20	20	40			20		20	20	60	24	2.5	2.5	2.5	2.5	6.25	6.25	6.25	6.25	28.75	48.75	28.75	68.75	24	82.142857	65	82.14286	72.36842	96	
1SV22EC033	20	20	40	20	19	39			20		20	20	60	25	2.5	2.5	2.5	2.5	9.25	9.25	9.25	9.25	31.75	51.75	31.75	70.75	25	90.714286	69	90.71429	74.47368	100	
1SV22EC034	17	18	35	20	20	40			16	15	19	50	25	25	2.5	2.5	2.5	2.5	7	7	7	7	24.5	63.5	28.5	46.5	25	70.846667	81.42857	48.94737	37	100	
1SV22EC035	17	14	31	20	20	40			20	19	18	57	24	24	2.5	2.5	2.5	2.5	5	5	5	5	26.5	61.5	25.5	44.5	24	75.714286	82	72.85714	46.84211	96	
1SV22EC036	11	9	20	14	9	23			20	20	19	59	25	25	2.5	2.5	2.5	2.5	1.75	1.75	1.75	1.75	24.25	47.25	23.25	24.25	25	69.285714	63	66.42857	25.52632	100	
1SV22EC037	18	20	38	20	20	40			20	20	20	60	25	25	2.5	2.5	2.5	2.5	5.25	5.25	5.25	5.25	27.75	67.75	27.75	45.75	25	79.285714	90.33333	79.28571	48.15789	100	
1SV22EC038	18	18	36	20	20	40			20		20	20	60	25	2.5	2.5	2.5	2.5	4.75	4.75	4.75	4.75	27.25	45.25	27.25	65.25	25	77.857143	60.33333	77.85714	68.68421	100	
1SV22EC039	9	19	28	19	20	39			14	20	20	54	24	24	2.5	2.5	2.5	2.5	4.5	4.5	4.5	4.5	27	59	27	36	24	77.142857	78.66667	77.14286	37.89474	96	
1SV22EC040	18	19	37	20	20	40			20		20	20	60	25	2.5	2.5	2.5	2.5	6.5	6.5	6.5	6.5	29	48	29	67	25	82.857143	67	82.85714	70.52632	100	
1SV22EC041	20	20	40	20	20	40			20	20	20	60	25	25	2.5	2.5	2.5	2.5	8.75	8.75	8.75	8.75	31.25	71.25	31.25	51.25	25	89.285714	95	89.28571	53.94737	100	
1SV22EC042	18	16	34	18	0	18			20	14	20	54	15	15	2.5	2.5	2.5	2.5	1.25	1.25	1.25	1.25	12.5	17.5	23.75	21.75	15	50.714286	77	67.85714	22.89474	60	
1SV22EC043	20	20	40	20	20	40	20				20	20	60	25	2.5	2.5	2.5	2.5	5	5	5	5	5	27.5	47.5	27.5	67.5	25	78.571429	63.33333	78.57143	71.05263	100
1SV22EC045	20	20	40	18	17	35	20			18	0	38	25	25	2.5	2.5	2.5	2.5	5.25	5.25	5.25	5.25	25.75	45.75	7.75	64.75	25	73.571429	61	22.14286	68.15789	100	
1SV22EC046	9	20	29	20	20	40	20				20	20																					