Grading Scale	
Score	**Level**
< 40% (39 and below)	1
< 60% =>40% (40 to 59)	2
= > 60% (60 and above)	3

Subject:	**Applied Physics for CSE Stream**		**Subject Code:**	**BPHYS102**		
Semester:	**First**		**Academic Year:**	**2023-24**		
	T1	**T2**	**AS1**	**AS2**	**SP**	**LAB**	
						Lab Record	**Test**
Course Out Comes-COs							
CO1	Q1/Q2		Q1 - Q8		Q1 - Q8	Q1 - Q2	Q1 - Q2
CO2	Q3/Q4		Q9 - Q12		Q9-Q12	Q3 - Q4	Q3 - Q4
CO3		Q1		Q13 - Q21	Q13 - Q21	Q5	Q5
CO4		Q2		Q22 -Q26	Q22 - Q30	Q6 - Q7	Q6 - Q7
CO5		Q3/Q4		Q27 - Q30		Q8	Q8

Note: T1- Test-I; T2-Test-II; T3-Test-III; AS1- Assignment-I; AS2- Assignment-II

SP- Seminar Presentation; Q- Question number as per the record.

Course Outcome BPHYS102			CO1									
CIE Assessment Type			T1	T2	AS1	AS2	SP	LAB-Record	LAB-Test			
Ref.Number			Q1/Q2		Q1 -Q8		Q1-Q8	Q1 - Q2	Q1 - Q2			
Max.Marks			12		80		25	30	50	197	%	Level
1	1WT23CS010	ASHWINI	4		77		24	29	48	182	92%	3
2	1WT23CS012	BHOOMIKA M.	3		75		24	29	49	180	91%	3
3	1WT23CS016	DEEKSHITHA P.	5		75		25	30	50	185	94%	3
4	1WT23CS017	DEEPTHI SRINIVASA	4		75		24	30	50	183	93%	3
5	1WT23CS018	DHANUSHREE R.	7		77		22	29		135	92%	3
6	1WT23CS019	DISHA B.G.	3		74		25	28		130	88%	3
7	1WT23CS023	KAVYA N.	6		74		0	30		110	75%	3
8	1WT23CS024	KEERTHANA T.R.	4		75			29		108	89%	3
9	1WT23CS026	KULSUM F.	4		77			30	50	161	94%	3
10	1WT23CS035	RANJITHA N.S.	6		77			30		113	93%	3
11	1WT23CS036	RUCHITHA P.	7		80			29		116	95%	3
12	1WT23CS037	SANA MUNIR	4		77			28		109	89%	3
13	1WT23CS039	SANIYA SUBHAN	3		74			28		105	86%	3
14	1WT23CS041	SHARADA KUMARI J.	6		77			29	49	161	94%	3
15	1WT23CS043	SIMRAN	11		80			28		119	98%	3
16	1WT23CS046	SUPRIYA GURU NAIK	7		71			28		106	87%	3
17	1WT23CS047	TASMIYA FATHIMA KHANUM A	3		77			30		110	90%	3
18	1WT23CS048	TEJASHWINI	3		77			29		109	89%	3
19	1WT23CS053	VARSHITHA A.S.	6		74			30	50	160	93%	3
20	1WT23CS054	VIJAYA LAKSHMI R.	3		70			28		101	83%	3

21	1WT23CS055	VYSHALINI	4		70			29	48	**151**	88%	3
22	1WT23CS058	ZAINAB TAJ	7		80			30		**117**	96%	3
23	1WT23IS001	ANKITHA GURU G.K.	9		80			30		**119**	98%	3
24	1WT23IS002	CHANDANA T.	3		74			30		**107**	88%	3
25	1WT23IS004	INDUMATHI R.	5		77			29	42	**153**	89%	3
26	1WT23IS005	JYOTHI MANJUNATH G	5		80			30		**115**	94%	3
27	1WT23IS006	KEERTHANA R.	5		77			30		**112**	92%	3
28	1WT23IS007	MEHAK TAJ	4		80			29		**113**	93%	3
29	1WT23IS008	MONIKA R.	4		70			29		**103**	84%	3
30	1WT23IS009	PRARTHAVI S.P.	5		70			28	48	**151**	88%	3
31	1WT23IS010	RITU V. CHETTY	6		70			28	47	**151**	88%	3
32	1WT23IS011	SARITHA A.	1		70			29		**100**	82%	3
33	1WT23IS012	SHAIK AATIKA KULSUM	3		80			30		**113**	93%	3
34	1WT23CS044	SIRI A.C. NAIK	2		80			30		**112**	92%	3
35	1WT23IS013	SUSHMITHA R.	6		77			28	42	**153**	89%	3
36	1WT23IS014	VARSHINI V.H.	4		77			30		**111**	91%	3
							Average % Value				90%	
Percentage of Students achieved CO1					**90%**							
Average Level of Grading.					**3**							

Total No. of Students	**36**			
Course Outcomes BPHYS102	**Average Level Grading**	3	**2**	**1**
CO1	3	36/36 = 100%	0/36 = 0%	0/36 = 0%

Course Outcome BPHYS102			CO2									
CIE Assessment Type			T1	T2	AS1	AS2	SP	LAB-Record	LAB-Test			
Ref.Number			Q3/Q4		Q9-Q12		Q9-Q12	Q3 - Q4	Q3 - Q4			
Max.Marks			13		40		25	30	50	158	%	Level
1	1WT23CS010	ASHWINI	0		38			29		67	81%	3
2	1WT23CS012	BHOOMIKA M.	7		40			29		76	92%	3
3	1WT23CS016	DEEKSHITHA P.	7		40			30		77	93%	3
4	1WT23CS017	DEEPTHI SRINIVASA	3		38			30		71	86%	3
5	1WT23CS018	DHANUSHREE R.	6		40			29		75	90%	3
6	1WT23CS019	DISHA B.G.	4		38			28	50	120	90%	3
7	1WT23CS023	KAVYA N.	2		40			30	50	122	92%	3
8	1WT23CS024	KEERTHANA T.R.	4		39			29		72	87%	3
9	1WT23CS026	KULSUM F.	5		40		25	30		100	93%	3
10	1WT23CS035	RANJITHA N.S.	9		38		24	30	50	151	96%	3
11	1WT23CS036	RUCHITHA P.	3		40		25	29	50	147	93%	3
12	1WT23CS037	SANA MUNIR	8		39		20	28		95	88%	3
13	1WT23CS039	SANIYA SUBHAN	4		39			28	49	120	90%	3
14	1WT23CS041	SHARADA KUMARI J.	7		40			29		76	92%	3
15	1WT23CS043	SIMRAN	7		40			28	50	125	94%	3
16	1WT23CS046	SUPRIYA GURU NAIK	4		38			28	50	120	90%	3
17	1WT23CS047	TASMIYA FATHIMA KHANUM A	2		40			30	50	122	92%	3
18	1WT23CS048	TEJASHWINI	0		39			29		68	82%	3
19	1WT23CS053	VARSHITHA A.S.	8		40			30		78	94%	3
20	1WT23CS054	VIJAYA LAKSHMI R.	1		35			28	42	106	80%	3

21	1WT23CS055	VYSHALINI	0		38			29		**67**	81%	3
22	1WT23CS058	ZAINAB TAJ	11		40			30		**81**	98%	3
23	1WT23IS001	ANKITHA GURU G.K.	6		40			30		**76**	92%	3
24	1WT23IS002	CHANDANA T.	8		38			30		**76**	92%	3
25	1WT23IS004	INDUMATHI R.	9		35			29		**73**	88%	3
26	1WT23IS005	JYOTHI MANJUNATH G	8		38			30		**76**	92%	3
27	1WT23IS006	KEERTHANA R.	5		39			30		**74**	89%	3
28	1WT23IS007	MEHAK TAJ	4		40			29	48	**121**	91%	3
29	1WT23IS008	MONIKA R.	1		37			29	44	**111**	83%	3
30	1WT23IS009	PRARTHAVI S.P.	4		40			28		**72**	87%	3
31	1WT23IS010	RITU V. CHETTY	0		35			28		**63**	76%	3
32	1WT23IS011	SARITHA A.	1		40			29	42	**112**	84%	3
33	1WT23IS012	SHAIK AATIKA KULSUM	9		40			30	50	**129**	97%	3
34	1WT23CS044	SIRI A.C. NAIK	1		38			30	48	**117**	88%	3
35	1WT23IS013	SUSHMITHA R.	4		39			28		**71**	86%	3
36	1WT23IS014	VARSHINI V.H.	2		39			30		**71**	86%	3
							Average % Value				94%	
Percentage of Students achieved CO2					**94%**							
Average Level of Grading.					**3**							

Total No. of Students	**36**			
Course Outcomes BPHYS102	**Average Level Grading**	3	**2**	**1**
CO2	3	6/36 = 100%	0/36 = 0%	0/36 = 0%

Course Outcome BPHYS102			CO3										
CIE Assessment Type			T1	T2	AS1	AS2	SP	LAB-Record	LAB-Test				
Ref.Number				Q1/Q2		Q13-Q21	Q13-Q21	Q5	Q5				
Max.Marks				12		90	25	15	50	192	%	Level	
1	1WT23CS010	ASHWINI		12		85		14		111	95%	3	
2	1WT23CS012	BHOOMIKA M.		11		84		14		109	93%	3	
3	1WT23CS016	DEEKSHITHA P.		12		85		15		112	96%	3	
4	1WT23CS017	DEEPTHI SRINIVASA		11		85		15		111	95%	3	
5	1WT23CS018	DHANUSHREE R.		12		90		14		116	99%	3	
6	1WT23CS019	DISHA B.G.		12		88		13		113	97%	3	
7	1WT23CS023	KAVYA N.		12		90		15		117	100%	3	
8	1WT23CS024	KEERTHANA T.R.		12		88		14		114	97%	3	
9	1WT23CS026	KULSUM F.		12		88		15		115	98%	3	
10	1WT23CS035	RANJITHA N.S.		12		88		15		115	98%	3	
11	1WT23CS036	RUCHITHA P.		12		90		14		116	99%	3	
12	1WT23CS037	SANA MUNIR		12		88		13		113	97%	3	
13	1WT23CS039	SANIYA SUBHAN		12		88		13		113	97%	3	
14	1WT23CS041	SHARADA KUMARI J.		12		88	22	14		136	96%	3	
15	1WT23CS043	SIMRAN		12		90		13		115	98%	3	
16	1WT23CS046	SUPRIYA GURU NAIK		12		85	0	13		110	77%	3	
17	1WT23CS047	TASMIYA FATHIMA KHANUM A		12		90	25	15		142	100%	3	
18	1WT23CS048	TEJASHWINI		12		88	23	14		137	96%	3	
19	1WT23CS053	VARSHITHA A.S.		12		85	22	15		134	94%	3	
20	1WT23CS054	VIJAYA LAKSHMI R.		11		85	22	13		131	92%	3	

21	1WT23CS055	VYSHALINI		11		88	22	14		**135**	95%	3
22	1WT23CS058	ZAINAB TAJ		12		90		15	50	**167**	100%	3
23	1WT23IS001	ANKITHA GURU G.K.		12		90		15		**117**	100%	3
24	1WT23IS002	CHANDANA T.		12		88		15		**115**	98%	3
25	1WT23IS004	INDUMATHI R.		11		89		14		**114**	97%	3
26	1WT23IS005	JYOTHI MANJUNATH G		10		88		15		**113**	97%	3
27	1WT23IS006	KEERTHANA R.		6		90		15		**111**	95%	3
28	1WT23IS007	MEHAK TAJ		10		90		14		**114**	97%	3
29	1WT23IS008	MONIKA R.		10		88		14		**112**	96%	3
30	1WT23IS009	PRARTHAVI S.P.		12		90		13		**115**	98%	3
31	1WT23IS010	RITU V. CHETTY		4		85		13		**102**	87%	3
32	1WT23IS011	SARITHA A.		12		90		14		**116**	99%	3
33	1WT23IS012	SHAIK AATIKA KULSUM		12		90		15		**117**	100%	3
34	1WT23CS044	SIRI A.C. NAIK		12		85		15		**112**	96%	3
35	1WT23IS013	SUSHMITHA R.		10		88	0	13		**111**	78%	3
36	1WT23IS014	VARSHINI V.H.		6		88	23	15		**132**	93%	3
							Average Value				**96%**	
Percentage of Students achieved CO3					**96%**							
Average Level of Grading.					**3**							

Total No. of Students	**36**			
Course Outcomes BPHYS102	**Average Level Grading**	3	**2**	**1**
CO3	3	6/36 = 100%	0/36 = 0%	0/36 = 0%

Course Outcome BPHYS102			CO4										
CIE Assessment Type			T1	T2	AS1	AS2	SP	LAB-Record	LAB-Test				
Ref.Number				Q3/Q4		Q22-Q26	Q22-Q30	Q6 - Q7	Q6 - Q7				
Max.Marks				13		50	25	30	50	168	%	Level	
1	1WT23CS010	ASHWINI		8		45		29		82	88%	3	
2	1WT23CS012	BHOOMIKA M.		13		48		29		90	97%	3	
3	1WT23CS016	DEEKSHITHA P.		13		48		30		91	98%	3	
4	1WT23CS017	DEEPTHI SRINIVASA		13		49		30		92	99%	3	
5	1WT23CS018	DHANUSHREE R.		12		50		29	50	141	99%	3	
6	1WT23CS019	DISHA B.G.		13		48		28		89	96%	3	
7	1WT23CS023	KAVYA N.		8		50		30		88	95%	3	
8	1WT23CS024	KEERTHANA T.R.		13		48		29	48	138	97%	3	
9	1WT23CS026	KULSUM F.		13		48		30		91	98%	3	
10	1WT23CS035	RANJITHA N.S.		13		50		30		93	100%	3	
11	1WT23CS036	RUCHITHA P.		13		50		29		92	99%	3	
12	1WT23CS037	SANA MUNIR		13		50		28	50	141	99%	3	
13	1WT23CS039	SANIYA SUBHAN		12		48		28		88	95%	3	
14	1WT23CS041	SHARADA KUMARI J.		13		48		29		90	97%	3	
15	1WT23CS043	SIMRAN		13		50		28		91	98%	3	
16	1WT23CS046	SUPRIYA GURU NAIK		12		47		28		87	94%	3	
17	1WT23CS047	TASMIYA FATHIMA KHANUM A		13		50		30		93	100%	3	
18	1WT23CS048	TEJASHWINI		13		45		29	50	137	96%	3	
19	1WT23CS053	VARSHITHA A.S.		13		48		30		91	98%	3	
20	1WT23CS054	VIJAYA LAKSHMI R.		11		42		28		81	87%	3	

21	1WT23CS055	VYSHALINI		11		45		29		**85**	91%	3
22	1WT23CS058	ZAINAB TAJ		13		50		30		**93**	100%	3
23	1WT23IS001	ANKITHA GURU G.K.		13		50	20	30	50	**163**	97%	3
24	1WT23IS002	CHANDANA T.		13		46	23	30	42	**154**	92%	3
25	1WT23IS004	INDUMATHI R.		12		43	23	29		**107**	91%	3
26	1WT23IS005	JYOTHI MANJUNATH G		13		47	0	30	48	**138**	82%	3
27	1WT23IS006	KEERTHANA R.		13		45	0	30	43	**131**	78%	3
28	1WT23IS007	MEHAK TAJ		13		50	24	29		**116**	98%	3
29	1WT23IS008	MONIKA R.		11		45	22	29		**107**	91%	3
30	1WT23IS009	PRARTHAVI S.P.		13		46	23	28		**110**	93%	3
31	1WT23IS010	RITU V. CHETTY		13		45	0	28		**86**	73%	3
32	1WT23IS011	SARITHA A.		10		50	22	29		**111**	94%	3
33	1WT23IS012	SHAIK AATIKA KULSUM		13		50		30		**93**	100%	3
34	1WT23CS044	SIRI A.C. NAIK		12		47		30		**89**	96%	3
35	1WT23IS013	SUSHMITHA R.		8		46		28		**82**	88%	3
36	1WT23IS014	VARSHINI V.H.		12		50		30	42	**134**	94%	3
							Average Value				**94%**	**3**
Percentage of Students achieved CO4					**94%**							
Average Level of Grading.					**3**							

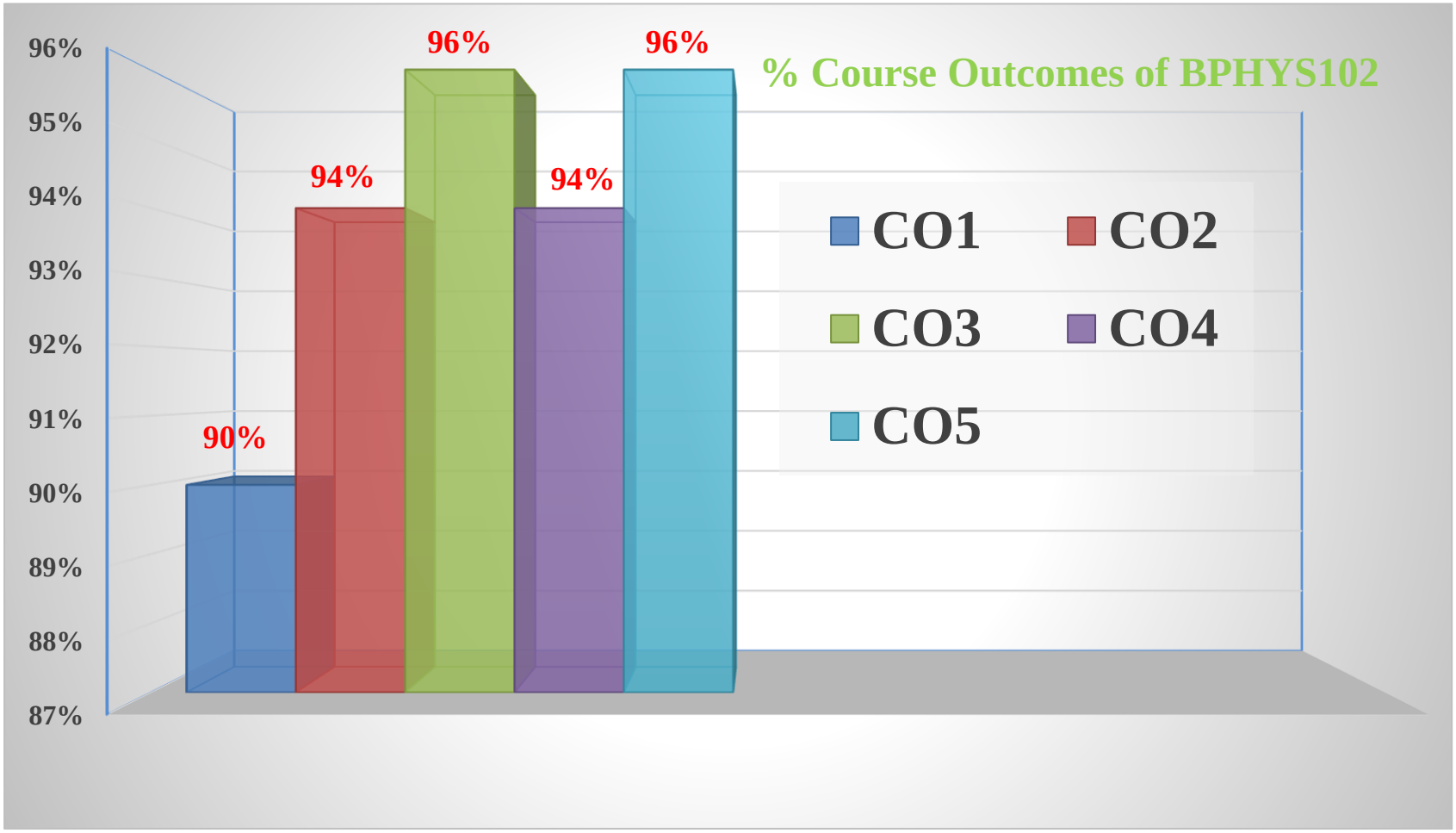
Total No. of Students	**36**			
Course Outcomes BPHYS102	**Average Level Grading**	3	**2**	**1**
CO4	3	6/36 = 100%	0/36 = 0%	0/36 = 0%

Course Outcome BPHYS102			CO5									
CIE Assessment Type			T1	T2	AS1	AS2	SP	LAB-Record	LAB-Test			
Ref.Number						Q27-Q30	Q31-Q36	Q8	Q8			
Max.Marks						40	25	15	50	130	%	Level
1	1WT23CS010	ASHWINI				38		14		52	95%	3
2	1WT23CS012	BHOOMIKA M.				40		14		54	98%	3
3	1WT23CS016	DEEKSHITHA P.				37		15		52	95%	3
4	1WT23CS017	DEEPTHI SRINIVASA				37		15		52	95%	3
5	1WT23CS018	DHANUSHREE R.				40		14		54	98%	3
6	1WT23CS019	DISHA B.G.				37		13		50	91%	3
7	1WT23CS023	KAVYA N.				39		15		54	98%	3
8	1WT23CS024	KEERTHANA T.R.				39		14		53	96%	3
9	1WT23CS026	KULSUM F.				40		15		55	100%	3
10	1WT23CS035	RANJITHA N.S.				40		15		55	100%	3
11	1WT23CS036	RUCHITHA P.				40		14		54	98%	3
12	1WT23CS037	SANA MUNIR				40		13		53	96%	3
13	1WT23CS039	SANIYA SUBHAN				36	25	13		74	93%	3
14	1WT23CS041	SHARADA KUMARI J.				38		14		52	95%	3
15	1WT23CS043	SIMRAN				40	25	13		78	98%	3
16	1WT23CS046	SUPRIYA GURU NAIK				39		13		52	95%	3
17	1WT23CS047	TASMIYA FATHIMA KHANUM A				40		15		55	100%	3
18	1WT23CS048	TEJASHWINI				37		14		51	93%	3
19	1WT23CS053	VARSHITHA A.S.				38		15		53	96%	3
20	1WT23CS054	VIJAYA LAKSHMI R.				35		13		48	87%	3

21	1WT23CS055	VYSHALINI				38		14		**52**	95%	3
22	1WT23CS058	ZAINAB TAJ				40	25	15		**80**	100%	3
23	1WT23IS001	ANKITHA GURU G.K.				38		15		**53**	96%	3
24	1WT23IS002	CHANDANA T.				37		15		**52**	95%	3
25	1WT23IS004	INDUMATHI R.				35		14		**49**	89%	3
26	1WT23IS005	JYOTHI MANJUNATH G				37		15		**52**	95%	3
27	1WT23IS006	KEERTHANA R.				40		15		**55**	100%	3
28	1WT23IS007	MEHAK TAJ				40		14		**54**	98%	3
29	1WT23IS008	MONIKA R.				35		14		**49**	89%	3
30	1WT23IS009	PRARTHAVI S.P.				40		13		**53**	96%	3
31	1WT23IS010	RITU V. CHETTY				35		13		**48**	87%	3
32	1WT23IS011	SARITHA A.				40		14		**54**	98%	3
33	1WT23IS012	SHAIK AATIKA KULSUM				40	25	15		**80**	100%	3
34	1WT23CS044	SIRI A.C. NAIK				37		15		**52**	95%	3
35	1WT23IS013	SUSHMITHA R.				37		13		**50**	91%	3
36	1WT23IS014	VARSHINI V.H.				40		15		**55**	100%	3
							Average Value				**96%**	**3**
Percentage of Students achieved CO5					**96%**							
Average Level of Grading.					**3**							

Total No. of Students	**36**				
Course Outcomes BPHYS102	**Average Level**		3	**2**	**1**
CO5	3		6/36 = 100%	0/36 = 0%	0/36 = 0%

Total No. of Students		36		
Course Outcomes BPHYS102	% Grading	% Distribution		
		3	2	1
CO1	90%	36/36 = 100%	0/36 = 0%	0/36 = 0%
CO2	94%	36/36 = 100%	0/36 = 0%	0/36 = 0%
CO3	96%	36/36 = 100%	0/36 = 0%	0/36 = 0%
CO4	94%	36/36 = 100%	0/36 = 0%	0/36 = 0%
CO5	96%	36/36 = 100%	0/36 = 0%	0/36 = 0%
Average %	94%			


% Course Outcomes of BPHYS102
96%
95%
94%
93%
92%
91%
90%
89%
88%
87%
90%
94%
96%
94%
96%
CO1
CO2
CO3
CO4
CO5

Course Outcomes by SEE Asessment

Max.Marks			100	%
1	1WT23CS010	ASHWINI		
2	1WT23CS012	BHOOMIKA M.		
3	1WT23CS016	DEEKSHITHA P.		
4	1WT23CS017	DEEPTHI SRINIVASA		
5	1WT23CS018	DHANUSHREE R.		
6	1WT23CS019	DISHA B.G.		
7	1WT23CS023	KAVYA N.		
8	1WT23CS024	KEERTHANA T.R.		
9	1WT23CS026	KULSUM F.		
10	1WT23CS035	RANJITHA N.S.		
11	1WT23CS036	RUCHITHA P.		
12	1WT23CS037	SANA MUNIR		
13	1WT23CS039	SANIYA SUBHAN		
14	1WT23CS041	SHARADA KUMARI J.		
15	1WT23CS043	SIMRAN		
16	1WT23CS046	SUPRIYA GURU NAIK		
17	1WT23CS047	TASMIYA FATHIMA KHANUM A		
18	1WT23CS048	TEJASHWINI		
19	1WT23CS053	VARSHITHA A.S.		
20	1WT23CS054	VIJAYA LAKSHMI R.		
21	1WT23CS055	VYSHALINI		
22	1WT23CS058	ZAINAB TAJ		

23	1WT23IS001	ANKITHA GURU G.K.		
24	1WT23IS002	CHANDANA T.		
25	1WT23IS004	INDUMATHI R.		
26	1WT23IS005	JYOTHI MANJUNATH G		
27	1WT23IS006	KEERTHANA R.		
28	1WT23IS007	MEHAK TAJ		
29	1WT23IS008	MONIKA R.		
30	1WT23IS009	PRARTHAVI S.P.		
31	1WT23IS010	RITU V. CHETTY		
32	1WT23IS011	SARITHA A.		
33	1WT23IS012	SHAIK AATIKA KULSUM		
34	1WT23CS044	SIRI A.C. NAIK		
35	1WT23IS013	SUSHMITHA R.		
36	1WT23IS014	VARSHINI V.H.		
Average Value				

Total No. of Students		36		
Course Outcomes by SEE Asessment	% Grading	% Distribution		
		3	2	1
CO1 to CO5				

Total No. of Students		36		
Course Outcomes by CIE & SEE Asessment	% Grading	% Distribution		
		3	2	1
By CIE Assessment	94%	36/36 = 100%	0/36 = 0%	0/36 = 0%
By SEE Assessment				
Average of CIE & SEE				

Attainment of CO1 Level by CIE Assessment

Parameter	COs	CO Attainment %	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	CO1	**90%**	**3**	**2**										**2**
T1 - Q1/Q2	Q1. State and Explain de-Broglie hypothesis. Derive the relation between phase velocity and group velocity. An electron has a speed of 600ms-1 accurate to 0.02 %. What is the accuracy with which the position can be determined? Q2.State and explain Heisenberg's Uncertainty principle. Mention its physical significance. Explain why electron cannot exist inside the nucleus. A rain drop of mass 10 x10-3 kg fall under gravity with a uniform velocity of 10 ms-1. Calculate the de-Broglie wavelength and kinetic energy.													
AS1 - Q1 to Q8	Properties of laser, Einstein's coeff A & B, Energy density Laser action, population inversion, meta stable state, requisite of laser SC diode laser, its working, application, barcode sensor, Laser application in laser printer, laser cooling and in defence Principle & structure of optical fiber, propagation of light, definition of acceptance angle Derivation for Numerical aperture, modes of propagation V number, Application of optical fiber in networking, Optical fiber communication. Classification of optical fiber, RI profile, Attenuation and fiber lossAttenuation and fiber loss													
SP - Q1 to Q8	Properties of laser, Einstein's coeff A & B, Energy density Laser action, population inversion, meta stable state, requisite of laser SC diode laser, its working, application, barcode sensor, Laser application in laser printer, laser cooling and in defence Principle & structure of optical fiber, propagation of light, definition of acceptance angle Derivation for Numerical aperture, modes of propagation V number, Application of optical fiber in networking, Optical fiber communication. Classification of optical fiber, RI profile, Attenuation and fiber lossAttenuation and fiber loss													

Note: Level 3 - Highly Mapped; Level 2 - Moderately Mapped; Level 1 - Low Mapped; Level 0 - Not Mapped

Attainment of CO2 Level by CIE Assessment

Parameter	COs	CO Attainment %	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	CO2	**94%**	**3**	**3**										**2**
T1 - Q3/Q4	Q3:What is a wave function? Mention its basic properties. Explain the physical interpretation of wave function / significance of a wave function. Derive an expression for Schro¨dinger time Independent equation in one dimensional form. Q4.Starting from Schro¨dinger time Independent equation, obtain the expression for the energy Eigen function, Eigen values and the normalized wave function for a particle in one dimensional infinite potential well.													
AS1 - Q9 to Q12	de-Broglie hypothesis and matter waves, de-Broglie wave length Phase velocity & group velocity, Heisenberg uncertainty principle & its application – Nonexistence of electron in nucleus Principle of complementarity, concept of wave function Physical significance of wave function, expectation value,													
SP - Q9 to Q12	de-Broglie hypothesis and matter waves, de-Broglie wave length Phase velocity & group velocity, Heisenberg uncertainty principle & its application – Nonexistence of electron in nucleus Principle of complementarity, concept of wave function Physical significance of wave function, expectation value,													

Note: Level 3 - Highly Mapped; Level 2 - Moderately Mapped; Level 1 - Low Mapped; Level 0 - Not Mapped

Attainment of CO3 Level by CIE Assessment

Parameter	COs	CO Attainment %	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	CO3	**96%**	**3**	**3**										**2**
T2 - Q1/Q2	Q1. Derive an expression for energy density in terms of Einstein's coefficients in Laser action. Given the Numerical Aperture 0.30 and R I of core 1.49. Calculate the RI of cladding. Q2.Define Acceptance angle and Numerical Aperture and hence derive an expression for NA in terms of RIs core, cladding and surrounding. Obtain the attenuation co-efficient of the given fiber of length 1.5 km given the input and output power 100mW and 80 mW.													
AS2 - Q13 to Q21	Representation of qubit by Bloch sphere, qubit and its properties Pauli's matrices and its properties, on /0 > & /1 > states Explanation of conjugate matrix, transpose matrix Controlled NOT gate, Unitary matrix Orthogonality & orthonormality of state, Quantum NOT gate, Pauli's Y gate and Z gate Introduction to Quantum computing, Moore's law and its end													
SP - Q13 to Q21	Representation of qubit by Bloch sphere, qubit and its properties Pauli's matrices and its properties, on /0 > & /1 > states Explanation of conjugate matrix, transpose matrix Controlled NOT gate, Unitary matrix Orthogonality & orthonormality of state, Quantum NOT gate, Pauli's Y gate and Z gate Introduction to Quantum computing, Moore's law and its end													

Note: Level 3 - Highly Mapped; Level 2 - Moderately Mapped; Level 1 - Low Mapped; Level 0 - Not Mapped

Attainment of CO4 Level by CIE Assessment

Parameter	COs	CO Attainment %	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	CO4	**94%**	**3**	**2**	**1**		**1**							**2**
T2 - Q3/Q4	Q3. Differentiate between classical and quantum computing. Q4. Describe Meissner's Effect and hence classify superconductors into Soft and Hard superconductors using M-H graphs. Given A = $\begin{bmatrix} 0 & -i \\ i & 0 \end{bmatrix}$ Prove that $A^{\dagger} = A$													
AS2 - Q22 to Q26	Mathieson's rule, Failures of free electron theory Fermi factor, variation of Fermi factor with temperature Superconductivity, variation of resistivity with temperature Meissner effect, effect of magnetic field on super conductivity Quantum tunneling, AC & DC Josephson eff													
SP - Q22 to Q30	Conductivity, resistivity, mobility Mathieson's rule, Failures of free electron theory Assumption of quantum free electron theory, Fermi energy Fermi factor, variation of Fermi factor with temperature Superconductivity, variation of resistivity with temperature Meissner effect, effect of magnetic field on super conductivity Quantum tunneling, AC & DC Josephson effect Critical field, temperature dependence of critical magnetic field Types of superconductors													

Note: Level 3 - Highly Mapped; Level 2 - Moderately Mapped; Level 1 - Low Mapped; Level 0 - Not Mapped

Attainment of CO5 Level by CIE Assessment

Parameter	COs	CO Attainment %	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
	CO5	**96%**	**3**	**2**	**1**		**2**			**3**	**3**	**1**		**2**
T2 - Q3/Q4	Q3. Explain the phenomenon of superconductivity and discuss qualitatively the BCS theory of superconductivity for negligible resistance of metal at temperatures close to absolute zero. Q4. Explain single qubit and multiple qubit with an example for each.													
AS2 - Q27 to Q30	Normal distribution and bell curves Statistical physics for computing Modeling the probability for proton decay Jump and parts of jump													
SP - Q31 to Q36	Monte Carlo method Modeling the probability for proton decay Normal distribution and bell curves Statistical physics for computing Modeling the probability for proton decay Jump and parts of jump													

Note: Level 3 - Highly Mapped; Level 2 - Moderately Mapped; Level 1 - Low Mapped; Level 0 - Not Mapped

Attainment of POs Level by CIE Assessment (interms of Garde Level)

Course Name	COs	CO Attainment %	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Applied Physics for CSE Stream BPHYS102	CO1	90%	3	2										2
	CO2	94%	3	3										2
	CO3	96%	3	3										2
	CO4	94%	3	2	1		1							2
	CO5	96%	3	2	1		2			3	3			2
Average		94%	3	2	1		2			1	1			2

Attainment of POs Level by CIE Assessment (interms of % Level)

Course Name	COs	CO Attainment %	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Applied Physics for CSE Stream BPHYS102	CO1	90%	90%	90%										90%
	CO2	94%	90%	94%										94%
	CO3	96%	90%	96%										96%
	CO4	94%	90%	94%	94%		94%							94%
	CO5	96%	90%	96%	96%		96%			96%	96%			96%
Average		94%	90%	94%	95%		95%			96%	96%			94%