

**DEPARTMENT OF CHEMISTRY**

SUBJECT	ENGINEERING CHEMISTRY	SUBJECT CODE	18CHE12
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COURSE OUTCOME

- CO1.** Use of free energy equilibria rationalize bulk properties and process of using thermodynamic consideration, electrochemical energy of systems.
- CO2.** Causes and effects of corrosion of metals and control of corrosion modification of surface properties of metals to develop resistance to corrosion, wear and tear impact etc by electroplating and electroless plating.
- CO3.** Production and consumption of energy for industrialisation of country and living standards of people. Electrochemical and concentration cells. Classical, modern batteries and fuel cells. Utilization of solar energy for different useful forms of energy.
- CO4.** Environmental pollution, waste management and water chemistry.
- CO5.** Different techniques of instrumental methods of analysis. Fundamental principle of Nanomaterials.

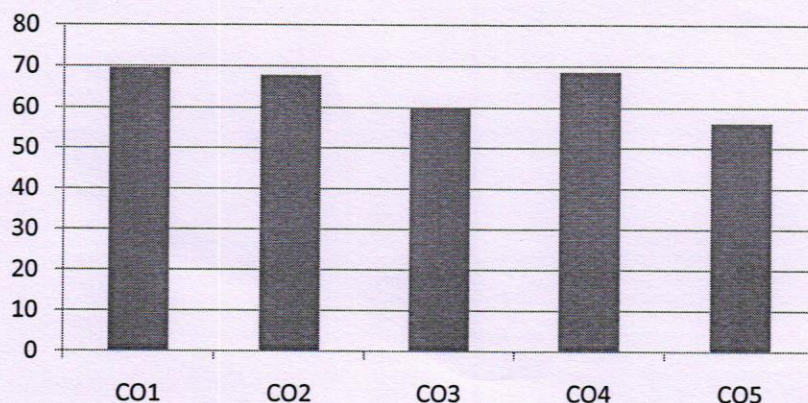
PROGRAM OUTCOMES

- 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.

NAME OF THE COLLEGE		SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY, TUMAKURU										
FACULTY NAME		Dr. CHANDRASEKHAR. N										
BRANCH		EC/EE/CV/ME			ACADEMIC YEAR				2019-20			
COURSE	B.E	SEMESTER			I	SECTION			C & D			
SUBJECT	ENGINEERING CHEMISTRY					SUBJECT CODE			18CHE12			
CO & PO MAPPING												
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	1	2	1	1	1	2	1	1	1	2
CO2	3	2	1	2	-	1	1	1	1	1	-	2
CO3	3	1	1	1	-	2	3	1	1	1	1	2
CO4	3	2	1	3	1	2	3	1	1	1	-	2
CO5	3	1	1	1	1	2	2	1	1	1	1	2
AVERAGE	3	1.6	1	1.8	1	1.6	2	1.2	1	1	1	2
OVERALL MAPPING OF SUBJECT												1.52

CO AND PO ATTAINMENT

		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	69.60	2.1	1.4	0.7	1.4	0.7	0.7	0.7	1.4	0.7	0.7	0.7	1.4
CO2	67.87	2.04	1.35	0.68	1.35	-	0.68	0.68	0.68	0.68	0.68	-	1.35
CO3	60.0	1.8	1.2	0.6	0.6	-	1.2	1.8	0.6	0.6	0.6	0.6	1.2
CO4	68.64	2.06	1.4	0.69	2.06		1.4	2.06	0.69	0.69	0.69	-	1.4
CO5	56.12	1.7	0.56	0.56	0.56	0.56	1.12	1.12	0.56	0.56	0.456	0.56	1.12
AVERAGE	64.446	1.94	1.182	0.646	1.194	0.63	1.02	1.272	0.786	0.646	0.6252	0.62	1.294
FINAL ATTAINMENT LEVEL													0.99



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SIET, TUMAKURU

Academic year	2019-20			SEM I			Total strength			87	Subject					Engg. Chemistry					Code					18CHE12														
SEM: SEC: C&D	IA TEST 1 (30M)			IA TEST 2 (30M)			IA TEST 3 (30M)			Assignment(10M)					SEE Marks (60 M)					Total CO Attainment					% of CO Attainment															
USN	CO1=15	CO4=15	TOTAL	CO2=15	CO4=15	TOTAL	CO3=15	CO5=15	TOTAL	CO1=2	CO2=2	CO3=2	CO4=2	CO5=2	CO1=12	CO2=12	CO3=12	CO4=12	CO5=12	CO1=29	CO2=29	CO3=29	CO4=44	CO5=29	CO1	CO2	CO3	CO4	CO5											
1SV19EC001	10	12	22	10	13	23	10	14	24	2	2	2	2	2	7.8	7.8	7.8	7.8	7.8	19.8	19.8	19.8	34.8	23.8	68.28	68.28	68.28	79.09	82.07											
1SV19EC002	10	10	20	10	11	21	7	7	14	2	2	2	2	2	7.2	7.2	7.2	7.2	7.2	19.2	19.2	16.2	30.2	16.2	66.21	66.21	55.86	68.64	55.86											
1SV19EC003	14	15	29	15	15	30	14	13	27	2	2	2	2	2	6.4	6.4	6.4	6.4	6.4	22.4	23.4	22.4	38.4	21.4	77.24	80.69	77.24	87.27	73.79											
1SV19EC004	5	4	9	4	4	8	5	4	9	2	2	2	2	2	0.6	0.6	0.6	0.6	0.6	7.6	6.6	7.6	10.6	6.6	26.21	22.76	26.21	24.09	22.76											
1SV19EC005	9	11	20	15	10	25	10	13	23	2	2	2	2	2	8.4	8.4	8.4	8.4	8.4	19.4	25.4	20.4	31.4	23.4	66.9	87.59	70.34	71.36	80.69											
1SV19EC006	10	15	25	11	15	26	10	14	24	2	2	2	2	2	6.4	6.4	6.4	6.4	6.4	18.4	19.4	18.4	38.4	22.4	63.45	66.9	63.45	87.27	77.24											
1SV19EC007	7	4	11	10	4	14	10	8	18	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	13.2	16.2	16.2	14.2	14.2	45.52	55.86	55.86	32.27	48.97											
1SV19EC008	14	13	27	14	15	29	15	15	30	2	2	2	2	2	9.6	9.6	9.6	9.6	9.6	25.6	25.6	26.6	39.6	26.6	88.28	88.28	91.72	90	91.72											
1SV19EC009	10	7	17	6	6	12	5	2	7	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	16.2	12.2	11.2	19.2	8.2	55.86	42.07	38.62	43.64	28.28											
1SV19EC010	7	7	14	5	5	10	10	6	16	2	2	2	2	2	3	3	3	3	3	12	10	15	17	11	41.38	34.48	51.72	38.64	37.93											
1SV19EC011	11	15	26	10	9	19	10	6	16	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	17.2	16.2	16.2	30.2	12.2	59.31	55.86	55.86	68.64	42.07											
1SV19EC012	10	8	18	5	5	10	10	10	20	2	2	2	2	2	6.6	6.6	6.6	6.6	6.6	18.6	13.6	18.6	21.6	18.6	64.14	46.9	64.14	49.09	64.14											
1SV19EC013	10	15	25	10	14	24	10	9	19	2	2	2	2	2	6.4	6.4	6.4	6.4	6.4	18.4	18.4	18.4	37.4	17.4	63.45	63.45	63.45	85	60											
1SV19EC014	11	11	22	14	14	28	10	13	23	2	2	2	2	2	7.4	7.4	7.4	7.4	7.4	20.4	23.4	19.4	34.4	22.4	70.34	80.69	66.9	78.18	77.24											
1SV19EC015	15	15	30	14	14	28	13	13	26	2	2	2	2	2	6.6	6.6	6.6	6.6	6.6	23.6	22.6	21.6	37.6	21.6	81.38	77.93	74.48	85.45	74.48											
1SV19EC016	14	14	28	10	10	20	11	15	26	2	2	2	2	2	6.4	6.4	6.4	6.4	6.4	22.4	18.4	19.4	32.4	23.4	77.24	63.45	66.9	73.64	80.69											
1SV19EC017	14	15	29	14	14	28	10	15	25	2	2	2	2	2	7	7	7	7	7	23	23	19	38	24	79.31	79.31	65.52	86.36	82.76											
1SV19EC018	15	15	30	15	14	29	15	13	27	2	2	2	2	2	8.4	8.4	8.4	8.4	8.4	25.4	25.4	25.4	39.4	23.4	87.59	87.59	87.59	89.55	80.69											
1SV19EC019	14	14	28	14	14	28	10	14	24	2	2	2	2	2	8	8	8	8	8	24	24	20	38	24	82.76	82.76	68.97	86.36	82.76											
1SV19EC021	10	11	21	15	10	25	13	10	23	2	2	2	2	2	5.8	5.8	5.8	5.8	5.8	17.8	22.8	20.8	28.8	17.8	61.38	78.62	71.72	65.45	61.38											
1SV19EC022	15	15	30	11	15	26	10	10	20	2	2	2	2	2	8	8	8	8	8	25	21	20	40	20	86.21	72.41	68.97	90.91	68.97											
1SV19EC023	14	13	27	10	14	24	9	9	18	2	2	2	2	2	1.6	1.6	1.6	1.6	1.6	17.6	13.6	12.6	30.6	12.6	60.69	46.9	43.45	69.55	43.45											
1SV19EC024	10	2	12	7	4	11	0	0	0	2	2	2	2	2	2	2	2	2	2	14	11	4	10	4	48.28	37.93	13.79	22.73	13.79											
1SV19EC025	15	15	30	10	4	24	9	9	18	2	2	2	2	2	7.6	7.6	7.6	7.6	7.6	24.6	19.6	18.6	28.6	18.6	84.83	67.59	64.14	65	64.14											
1SV19EC027	10	14	24	14	14	28	10	15	25	2	2	2	2	2	8.2	8.2	8.2	8.2	8.2	20.2	24.2	20.2	38.2	25.2	69.66	83.45	69.66	86.82	86.9											
1SV19EC028	5	5	10	0	0	0	3	0	3	2	2	2	2	2	1	1	1	1	1	8	3	6	8	3	27.59	10.34	20.69	18.18	10.34											
1SV19EC029	10	10	20	11	9	20	10	9	19	2	2	2	2	2	5.8	5.8	5.8	5.8	5.8	17.8	18.8	17.8	26.8	16.8	61.38	64.83	61.38	60.91	57.93											
1SV19EC030	14	10	24	6	6	12	0	3	3	2	2	2	2	2	3	3	3	3	3	19	11	5	21	8	65.52	37.93	17.24	47.73	27.59											
1SV19EC031	10	8	18	7	0	7	8	0	8	1	2	2	2	2	4.8	4.8	4.8	4.8	4.8	15.8	13.8	14.8	14.8	6.8	54.48	47.59	51.03	33.64	23.45											
1SV19ME001	10	1	11	10	5	15	10	7	17	2	2	2	2	2	6	6	6	6	6	18	18	18	14	15	62.07	62.07	62.07	31.82	51.72											
1SV19ME002	10	11	10	8	10	18	4	4	8	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	16.2	14.2	10.2	27.2	10.2	55.86	48.97	35.17	61.82	35.17											
1SV19ME003	10	4	14	10	4	14	10	3	13	2	2	2	2	2	1.6	1.6	1.6	1.6	1.6	13.6	13.6	13.6	11.6	6.6	46.9	46.9	46.9	26.36	22.76											
1SV19ME004	7	7	14	5	5	10	6	6	12	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	13.2	11.2	12.2	18.2	12.2	45.52	38.62	42.07	41.36	42.07											
1SV19ME005	10	3	13	5	2	7	10	6	16	2	2	2	2	2	4.4	4.4	4.4	4.4	4.4	16.4	11.4	16.4	11.4	12.4	56.55	39.31	56.55	25.91	42.76											
1SV19ME006	15	14	29	15	14	29	10	7	17	2	2	2	2	2	5.8	5.8	5.8	5.8	5.8	22.8	22.8	17.8	35.8	14.8	78.62	78.62	61.38	81.36	51.03											
1SV19ME008	13	13	26	13	10	23	11	11	22	2	2	2	2	2	7.2	7.2	7.2	7.2	7.2	22.2	22.2	20.2	32.2	20.2	76.55	76.55	69.66	73.18	69.66											
1SV19ME010	13	14	27	10	11	21	11	11	22	2	2	2	2	2	5.8	5.8	5.8	5.8	5.8	20.8	17.8	18.8	32.8	18.8	71.72	61.38	64.83	74.55	64.83											
1SV19ME011	13	14	27	4	4	8	4	4	8	2	2	2	2	2	2.6	2.6	2.6	2.6	2.6	17.6	8.6	8.6	22.6	8.6	60.69	29.66	29.66	51.36	29.66											
1SV19ME012	10	15	25	14	10	24	13	0	13	2	2	2	2	2	6.6	6.6	6.6	6.6	6.6	18.6	22.6	21.6	33.6	8.6	64.14	77.93	74.48	76.36	29.66											
1SV19ME013	10	9	19	5	4	9	6	6	12	2	2	2	2	2	4.6	4.6	4.6	4.6	4.6	16.6	11.6	12.6	19.6	12.6	57.24	40	43.45	44.55	43.45											
1SV19ME014	10	8	18	10	3	13	10	6	16	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	16.2	16.2	16.2	17.2	12.2	55.86	55.86	55.86	39.09	42.07											
1SV19ME015	10	9	19	8	5	13	10	3	13	2	2	2	2	2	4.8	4.8	4.8	4.8	4.8	16.8	14.8	16.8	20.8	9.8	57.93	51.03	57.93	47.27	33.79											
1SV19EE001	10	15	25	6	2	8	10	10	20	2	2	2	2	2	5.8	5.8	5.8	5.8	5.8	17.8	13.8	17.8	24.8	17.8	61.38	47.59	61.38	56.36	61.38											
1SV19EE002	10	12	22	10	5	15	6	6	12	2	2	2	2	2	4.2	4.2	4.2	4.2	4.2	16.2	16.2	12.2	23.2	12.2	55.86	55.86	42.07	52.73	42.07											
1SV19EE004	10	9	19	10	5	15	3	3	6	2	2	2	2	2	0.6	0.6	0.6	0.6	0.6	12.6	12.6	5.6	16.6	5.6	43.45	43.45	19.31	37.73	19.31											
1SV19EE005	10	6	16	7	8	15	8	8	16	2	2	2	2	2	5.8	5.8	5.8	5.8	5.8	17.8	14.8	15.8	21.8	15.8	61.38	51.03	54.48	49.55	54.48											
1SV19EE006	10	13	23	10	13	23	9	9	18	2	2	2	2	2	5.2	5.2	5.2	5.2	5.2	17.2	16.2	16.2	33.2	16.2	59.31	59.31	55.86	75.45	55.86											
1SV19EE007	13	14	27	10	9	19	10	10	20	2	2	2	2	2	8.8	8.8	8.8	8.8	8.8	23.8	20.8	20.8	33.8	20.8	82.07	71.72	71.72	76.82	71.72											
1SV19EE008	10	8	18	10	3	13	10	8	18	2	2	2	2	2	3.4	3.4	3.4	3.4	3.4	15.4	15.4	15.4	16.4	13.4	53.1	53.1	53.1	37.27	46.21											
1SV19EE009	14	14	28	10	8	18	3	0	3																															



DEPARTMENT OF CHEMISTRY

SUBJECT	ENGINEERING CHEMISTRY	SUBJECT CODE	18CHE22
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COURSE OUTCOME

C01. Use of free energy equilibria rationalize bulk properties and process of using thermodynamic consideration, electrochemical energy of systems.

C02. Causes and effects of corrosion of metals and control of corrosion modification of surface properties of metals to develop resistance to corrosion, wear and tear impact etc by electroplating and electroless plating.

C03. Production and consumption of energy for industrialisation of country and living standards of people. Electrochemical and concentration cells. Classical, modern batteries and fuel cells. Utilization of solar energy for different useful forms of energy.

C04. Environmental pollution, waste management and water chemistry.

C05. Different techniques of instrumental methods of analysis. Fundamental principle of Nanomaterials.

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.

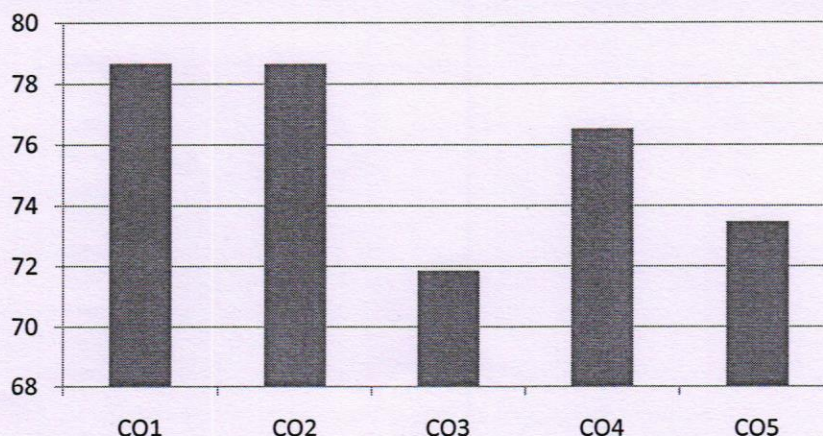
PO11 Project management and finance: An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multidisciplinary environments.

PO12 Life-long learning: A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning.

NAME OF THE COLLEGE		SHRIDEVI INSTITUTE OF ENGINEERING & TECHNOLOGY, TUMAKURU											
FACULTY NAME		Dr. CHANDRASEKHAR. N											
BRANCH		CSE/ISE			ACADEMIC YEAR				2019-20				
COURSE	B.E	SEMESTER			II		SECTION			A & B			
SUBJECT	ENGINEERING CHEMISTRY					SUBJECT CODE			18CHE22				
CO & PO MAPPING													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	
CO1	3	2	1	2	1	1	1	2	1	1	1	2	
CO2	3	2	1	2	-	1	1	1	1	1	-	2	
CO3	3	1	1	1	-	2	3	1	1	1	1	2	
CO4	3	2	1	3	1	2	3	1	1	1	-	2	
CO5	3	1	1	1	1	2	2	1	1	1	1	2	
AVERAGE	3	1.6	1	1.8	1	1.6	2	1.2	1	1	1	2	
OVERALL MAPPING OF SUBJECT												1.52	

CO AND PO ATTAINMENT

	CO%	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	78.67	2.36	1.57	0.79	1.57	0.79	0.79	0.79	1.57	0.79	0.79	0.79	1.57
CO2	78.66	2.36	1.57	0.79	1.57	-	0.79	0.79	0.79	0.79	0.79	-	1.57
CO3	71.85	2.15	0.72	0.72	0.72	-	1.43	2.15	0.72	0.72	0.72	0.72	1.43
CO4	76.54	2.29	1.53	0.77	2.29	0.77	1.53	2.29	0.77	0.77	0.77	-	1.53
CO5	73.48	2.21	0.73	0.73	0.73	0.73	1.47	1.47	0.73	0.73	0.73	0.73	1.47
AVERAGE	75.84	2.274	1.224	0.76	1.376	0.763	1.202	1.498	0.916	0.76	0.76	0.75	1.514
FINAL ATTAINMENT LEVEL													1.15



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SIET., TUMAKURU.

SEM (A & B)	II	Total strength					108	Subject					Engg. Chemistry					Subject Code					18CHE22					Total Cos ATTAINMENT					Avg of individual CO				
SEM:II,SEC:A&B	IA TEST 1 (30M)	IA TEST 2 (30M)			IA TEST 3 (60M)					SIGNEMENT(10) + Grace (10)					SEE MARKS(50M)					Total Cos ATTAINMENT					Avg of individual CO												
USN	CO1	CO2	TOTAL	CO3	CO4	TOTAL	CO1	CO2	CO4	CO5	TOTAL	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5	CO1(44)	CO2(44)	CO3(29)	CO4(44)	CO5(29)	CO1	CO2	CO3	CO4	CO5						
1SV19CS001	15	15	30	13	13	26	15	13	15	11	54	3	3	3	3	3	6.6	6.6	6.6	6.6	6.6	39.6	37.6	22.6	37.6	20.6	90	85.45	77.93	85.45	71.03						
1SV19CS003	15	15	30	15	15	30	11	13	13	11	48	4	4	4	4	4	6.8	6.8	6.8	6.8	6.8	36.8	38.8	25.8	38.8	21.8	83.636	88.18	88.97	88.18	75.17						
1SV19CS004	15	15	30	15	14	29	11	15	15	15	56	2.8	2.8	2.8	2.8	2.8	4.8	4.8	4.8	4.8	4.8	33.6	37.6	22.6	36.6	22.6	76.364	85.45	77.93	83.18	77.93						
1SV19CS005	15	14	29	15	15	30	15	15	15	15	60	4	4	4	4	4	3.6	3.6	3.6	3.6	3.6	37.6	36.6	22.6	37.6	22.6	85.455	83.18	77.93	85.45	77.93						
1SV19CS006	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	6.6	6.6	6.6	6.6	6.6	40.6	40.6	25.6	40.6	25.6	92.273	92.27	88.28	92.27	88.28						
1SV19CS007	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	5.6	5.6	5.6	5.6	5.6	39.6	39.6	23.6	38.6	24.6	90	90	81.38	87.73	84.83						
1SV19CS008	15	15	30	14	12	26	15	15	15	15	60	4	4	4	4	4	6.6	6.6	6.6	6.6	6.6	40.6	40.6	24.6	37.6	25.6	92.273	92.27	84.83	85.45	88.28						
1SV19CS009	14	14	28	0	0	0	15	11	15	15	56	2.8	2.8	2.8	2.8	2.8	3	3	3	3	3	34.8	30.8	5.8	20.8	20.8	79.091	70	20	47.27	71.72						
1SV19CS011	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	5.2	5.2	5.2	5.2	5.2	39.2	39.2	23.2	38.2	24.2	89.091	89.09	80	86.82	83.45						
1SV19CS013	15	15	30	14	15	29	15	15	15	15	60	4	4	4	4	4	6	6	6	6	6	40	40	24	40	25	90.909	90.91	82.76	90.91	86.21						
1SV19CS014	14	14	28	15	15	30	15	15	15	15	60	4	4	4	4	4	6.2	6.2	6.2	6.2	6.2	39.2	39.2	25.2	40.2	25.2	89.091	89.09	86.9	91.36	86.9						
1SV19CS015	15	15	30	14	14	28	15	14	12	15	56	4	4	4	4	4	7.4	7.4	7.4	7.4	7.4	41.4	40.4	25.4	37.4	26.4	94.091	91.82	87.59	85	91.03						
1SV19CS016	14	14	28	14	13	27	14	14	12	14	54	4	4	4	4	4	5.8	5.8	5.8	5.8	5.8	37.8	37.8	23.8	34.8	23.8	85.909	85.91	82.07	79.09	82.07						
1SV19CS017	15	15	30	10	15	25	10	11	9	10	40	3	3	3	3	3	4.6	4.6	4.6	4.6	4.6	32.6	33.6	17.6	31.6	17.6	74.091	76.36	60.69	71.82	60.69						
1SV19CS018	15	15	30	13	13	26	15	14	14	15	58	4	4	4	4	4	6.2	6.2	6.2	6.2	6.2	40.2	39.2	23.2	37.2	25.2	91.364	89.09	80	84.55	86.9						
1SV19CS019	15	15	30	12	12	24	10	10	9	7	36	4	4	4	4	4	2.2	2.2	2.2	2.2	2.2	31.2	31.2	18.2	27.2	13.2	70.909	70.91	62.76	61.82	45.52						
1SV19CS020	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	6.6	6.6	6.6	6.6	6.6	40.6	40.6	25.6	40.6	25.6	92.273	92.27	88.28	92.27	88.28						
1SV19CS021	15	14	29	13	13	26	15	15	15	15	60	4	4	4	4	4	8	8	8	8	8	42	41	25	40	27	95.455	93.18	86.21	90.91	93.1						
1SV19CS022	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	5.8	5.8	5.8	5.8	5.8	39.8	39.8	23.8	38.8	24.8	90.455	90.45	82.07	88.18	85.52						
1SV19CS023	15	15	30	14	14	28	15	15	15	15	60	3.6	3.6	3.6	3.6	3.6	5.4	5.4	5.4	5.4	5.4	39	39	23	38	24	88.636	88.64	79.31	86.36	82.76						
1SV19CS024	15	15	30	14	14	28	10	10	12	12	44	3.6	3.6	3.6	3.6	3.6	3.8	3.8	3.8	3.8	3.8	32.4	32.4	21.4	33.4	19.4	73.636	73.64	73.79	75.91	66.9						
1SV19CS025	15	15	30	10	15	25	15	15	14	14	58	4	4	4	4	4	6.2	6.2	6.2	6.2	6.2	40.2	40.2	20.2	39.2	24.2	91.364	91.36	69.66	89.09	83.45						
1SV19CS026	15	15	30	10	7	17	0	0	0	0	0	4	4	4	4	4	0.8	0.8	0.8	0.8	0.8	19.8	19.8	14.8	11.8	4.8	45	45	51.03	26.82	16.55						
1SV19CS027	15	15	30	15	14	29	15	15	15	15	60	4	4	4	4	4	6.6	6.6	6.6	6.6	6.6	40.6	40.6	25.6	39.6	25.6	92.273	92.27	88.28	90	88.28						
1SV19CS028	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	6.8	6.8	6.8	6.8	6.8	40.8	40.8	24.8	39.8	25.8	92.727	92.73	85.52	90.45	88.97						
1SV19CS029	15	15	30	13	13	26	15	15	15	15	60	3.8	3.8	3.8	3.8	3.8	5.8	5.8	5.8	5.8	5.8	39.6	39.6	22.6	37.6	24.6	90	90	77.93	85.45	84.83						
1SV19CS030	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	7.6	7.6	7.6	7.6	7.6	41.6	41.6	25.6	40.6	26.6	94.545	94.55	88.28	92.27	91.72						
1SV19CS031	15	15	30	14	13	27	10	10	12	12	44	3	3	3	3	3	3.6	3.6	3.6	3.6	3.6	31.6	31.6	20.6	31.6	18.6	71.818	71.82	71.03	71.82	64.14						
1SV19CS032	15	15	30	14	14	28	15	15	14	14	58	4	4	4	4	4	5.8	5.8	5.8	5.8	5.8	39.8	39.8	23.8	37.8	23.8	90.455	90.45	82.07	85.91	82.07						
1SV19CS033	15	15	30	14	14	28	14	14	15	13	56	4	4	4	4	4	4.8	4.8	4.8	4.8	4.8	37.8	37.8	22.8	37.8	21.8	85.909	85.91	78.62	85.91	75.17						
1SV19CS034	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	8	8	8	8	8	42	42	27	42	27	95.455	95.45	93.1	95.45	93.1						
1SV19CS035	15	15	30	14	15	29	15	15	15	15	60	3.8	3.8	3.8	3.8	3.8	6	6	6	6	6	39.8	39.8	23.8	39.8	24.8	90.455	90.45	82.07	90.45	85.52						
1SV19CS036	15	15	30	14	14	28	15	15	15	15	60	3	3	3	3	3	4.2	4.2	4.2	4.2	4.2	37.2	37.2	21.2	36.2	22.2	84.545	84.55	73.1	82.27	76.55						
1SV19CS037	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	4	4	4	4	4	38	38	23	38	23	86.364	86.36	79.31	86.36	79.31						
1SV19CS038	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	4.4	4.4	4.4	4.4	4.4	38.4	38.4	22.4	37.4	23.4	87.273	87.27	77.24	85	80.69						
1SV19CS039	6	6	12	0	0	0	0	0	0	0	0	4	4	4	4	4	3.4	3.4	3.4	3.4	3.4	13.4	13.4	7.4	7.4	7.4	30.455	30.45	25.52	16.82	25.52						
1SV19CS040	14	15	29	14	15	29	15	15	15	15	60	4	4	4	4	4	7.4	7.4	7.4	7.4	7.4	40.4	41.4	25.4	41.4	26.4	91.818	94.09	87.59	94.09	91.03						
1SV19CS041	15	15	30	14	14	28	15	14	15	14	58	4	4	4	4	4	5.4	5.4	5.4	5.4	5.4	39.4	38.4	23.4	38.4	23.4	89.545	87.27	80.69	87.27	80.69						

1SV19CS042	15	15	30	14	13	27	15	15	15	15	60	3.8	3.8	3.8	3.8	3.8	6	6	6	6	6	39.8	39.8	23.8	37.8	24.8	90.455	90.45	82.07	85.91	85.52
1SV19CS043	15	14	29	14	14	28	13	15	15	15	58	4	4	4	4	4	3.6	3.6	3.6	3.6	3.6	35.6	36.6	21.6	36.6	22.6	80.909	83.18	74.48	83.18	77.93
1SV19CS044	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	5.4	5.4	5.4	5.4	5.4	39.4	39.4	23.4	38.4	24.4	89.545	89.55	80.69	87.27	84.14
1SV19CS045	15	15	30	14	14	28	15	15	15	15	60	4	4	4	4	4	7.2	7.2	7.2	7.2	7.2	41.2	41.2	25.2	40.2	26.2	93.636	93.64	86.9	91.36	90.34
1SV19CS046	15	15	30	14	14	28	10	10	14	14	48	4	4	4	4	4	5.6	5.6	5.6	5.6	5.6	34.6	34.6	23.6	37.6	23.6	78.636	78.64	81.38	85.45	81.38
1SV19CS047	15	15	30	15	14	29	15	15	15	15	60	4	4	4	4	4	6.8	6.8	6.8	6.8	6.8	40.8	40.8	25.8	39.8	25.8	92.727	92.73	88.97	90.45	88.97
1SV19CS048	15	15	30	14	14	28	15	14	14	15	58	4	4	4	4	4	6.2	6.2	6.2	6.2	6.2	40.2	39.2	24.2	38.2	25.2	91.364	89.09	83.45	86.82	86.9
1SV19CS049	15	15	30	14	15	29	15	15	15	15	60	4	4	4	4	4	5.2	5.2	5.2	5.2	5.2	39.2	39.2	23.2	39.2	24.2	89.091	89.09	80	89.09	83.45
1SV19CS050	15	15	30	14	15	29	15	15	15	15	60	4	4	4	4	4	7.2	7.2	7.2	7.2	7.2	41.2	41.2	25.2	41.2	26.2	93.636	93.64	86.9	93.64	90.34
1SV19CS051	14	14	28	14	14	28	14	14	15	15	58	4	4	4	4	4	5.8	5.8	5.8	5.8	5.8	37.8	37.8	23.8	38.8	24.8	85.909	85.91	82.07	88.18	85.52
1SV19CS052	15	15	30	14	14	28	13	13	11	15	52	4	4	4	4	4	6	6	6	6	6	38	38	24	35	25	86.364	86.36	82.76	79.55	86.21
1SV19CS053	15	15	30	14	15	29	15	15	15	15	60	4	4	4	4	4	7.8	7.8	7.8	7.8	7.8	41.8	41.8	25.8	41.8	26.8	95	95	88.97	95	92.41
1SV19CS054	15	15	30	14	14	28	15	14	12	15	56	3.6	3.6	3.6	3.6	3.6	4.2	4.2	4.2	4.2	4.2	37.8	36.8	21.8	33.8	22.8	85.909	83.64	75.17	76.82	78.62
1SV19CS055	15	15	30	13	12	25	15	15	14	14	58	3.2	3.2	3.2	3.2	3.2	2.2	2.2	2.2	2.2	2.2	35.4	35.4	18.4	31.4	19.4	80.455	80.45	63.45	71.36	66.9
1SV19CS056	15	15	30	15	14	29	15	15	15	15	60	3.6	3.6	3.6	3.6	3.6	5.4	5.4	5.4	5.4	5.4	39	39	24	38	24	88.636	88.64	82.76	86.36	82.76
1SV19CS057	15	14	29	14	15	29	15	15	15	15	60	4	4	4	4	4	7.6	7.6	7.6	7.6	7.6	41.6	40.6	25.6	41.6	26.6	94.545	92.27	88.28	94.55	91.72
1SV19CS058	15	15	30	14	15	29	15	13	13	15	56	4	4	4	4	4	7.8	7.8	7.8	7.8	7.8	41.8	39.8	25.8	39.8	26.8	95	90.45	88.97	90.45	92.41
1SV19CS059	13	13	26	11	15	26	15	15	14	14	58	4	4	4	4	4	4.6	4.6	4.6	4.6	4.6	36.6	36.6	19.6	37.6	22.6	83.182	83.18	67.59	85.45	77.93
1SV19CS060	15	15	30	14	15	29	15	15	15	15	60	3.8	3.8	3.8	3.8	3.8	5.4	5.4	5.4	5.4	5.4	39.2	39.2	23.2	39.2	24.2	89.091	89.09	80	89.09	83.45
1SV19CS061	15	14	29	13	14	27	15	15	15	15	60	4	4	4	4	4	6	6	6	6	6	40	39	23	39	25	90.909	88.64	79.31	88.64	86.21
1SV19CS062	14	14	28	14	15	29	11	15	15	15	56	4	4	4	4	4	5.8	5.8	5.8	5.8	5.8	34.8	38.8	23.8	39.8	24.8	79.091	88.18	82.07	90.45	85.52
1SV19CS063	14	14	28	14	14	28	13	12	12	13	50	2.6	2.6	2.6	2.6	2.6	6	6	6	6	6	35.6	34.6	22.6	34.6	21.6	80.909	78.64	77.93	88.64	74.48
1SV19CS064	15	15	30	15	15	30	13	11	11	13	48	3.2	3.2	3.2	3.2	3.2	5.2	5.2	5.2	5.2	5.2	36.4	34.4	23.4	34.4	21.4	82.727	78.18	80.69	78.18	73.79
1SV19CS065	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	7	7	7	7	7	41	41	26	41	26	93.182	93.18	89.66	93.18	89.66
1SV19CS066	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	6.6	6.6	6.6	6.6	6.6	40.6	40.6	25.6	40.6	25.6	92.273	92.27	88.28	92.27	88.28
1SV19CS067	15	15	30	15	15	30	14	15	13	14	56	3.2	3.2	3.2	3.2	3.2	6	6	6	6	6	38.2	39.2	24.2	37.2	23.2	86.818	89.09	83.45	84.55	80
1SV19CS068	0	0	0	0	0	0	11	13	13	11	48	3.4	3.4	3.4	3.4	3.4	5	5	5	5	5	19.4	21.4	8.4	21.4	19.4	44.091	48.64	28.97	48.64	66.9
1SV19CS069	15	14	29	15	14	29	13	13	13	13	52	4	4	4	4	4	5.4	5.4	5.4	5.4	5.4	37.4	36.4	24.4	36.4	22.4	85	82.73	84.14	82.73	77.24
1SV19CS070	15	15	30	15	14	29	15	15	15	15	60	4	4	4	4	4	7.2	7.2	7.2	7.2	7.2	41.2	41.2	26.2	40.2	26.2	93.636	93.64	90.34	91.36	90.34
1SV19CS071	15	14	29	15	14	29	15	15	15	15	60	4	4	4	4	4	7.8	7.8	7.8	7.8	7.8	41.8	40.8	26.8	40.8	26.8	95	92.73	92.41	92.73	92.41
1SV19CS072	15	15	30	14	14	28	14	15	15	14	58	3.2	3.2	3.2	3.2	3.2	5.6	5.6	5.6	5.6	5.6	37.8	38.8	22.8	37.8	22.8	85.909	88.18	78.62	85.91	78.62
1SV19CS073	15	15	30	15	14	29	15	15	15	15	60	3.4	3.4	3.4	3.4	3.4	2.8	2.8	2.8	2.8	2.8	36.2	36.2	21.2	35.2	21.2	82.273	82.27	73.1	80	73.1
1SV19CS074	15	15	14	14	14	28	15	15	15	15	60	4	4	4	4	4	4.8	4.8	4.8	4.8	4.8	38.8	38.8	22.8	37.8	23.8	88.182	88.18	78.62	85.91	82.07
1SV19CS075	5	4	9	14	14	28	15	14	13	10	52	3.6	3.6	3.6	3.6	3.6	3.4	3.4	3.4	3.4	3.4	27	25	21	34	17	61.364	56.82	72.41	77.27	58.62
1SV19CS076	15	14	29	13	14	27	15	15	14	14	58	3.8	3.8	3.8	3.8	3.8	5.4	5.4	5.4	5.4	5.4	39.2	38.2	22.2	37.2	23.2	89.091	86.82	76.55	84.55	80
1SV19CS077	15	15	30	10	15	25	14	14	14	14	56	4	4	4	4	4	5.2	5.2	5.2	5.2	5.2	38.2	38.2	19.2	38.2	23.2	86.818	86.82	66.21	86.82	80
1SV19CS079	15	15	30	13	14	27	13	11	11	13	48	3.6	3.6	3.6	3.6	3.6	4.4	4.4	4.4	4.4	4.4	36	34	21	33	21	81.818	77.27	72.41	75	72.41
1SV19CS080	15	15	30	15	15	30	15	15	15	15	60	4	4	4	4	4	6.4	6.4	6.4	6.4	6.4	40.4	40.4	25.4	40.4	25.4	91.818	91.82	87.59	91.82	87.59
1SV19CS081	15	15	30	14	14	28	15	15	15	15	60	3.6	3.6	3.6	3.6	3.6	6	6	6	6	6	39.6	39.6	23.6	38.6	24.6	90	90	81.38	87.73	84.83
1SV19CS082	15	15	30	13	15	28	15	15	15	15	60	4	4	4	4	4	8.4	8.4	8.4	8.4	8.4	42.4	42.4	25.4	42.4	27.4	96.364	96.36	87.59	96.36	94.48
1SV19CS083	15	15	30	15	13	28	13	13	14	14	54	4	4	4	4	4	7	7	7	7	7	39	39	26	38	25	88.636	88.64	89.66	86.36	86.21

