

LESSON PLAN

Department: ECE

NAME OF THE FACULTY:

CLASS: ECE-B

BRANCH: ECE

SUBJECT: Engineering Chemistry

Year: 2015-16

SEM: 1st

S.No	Period	Topic	Unit	Teaching Methodology	Remarks	Correction Review
1	6	Polymerization reactions, Basic concepts	1	CR		
2	3	Types of polymerization, addition and condensation polymerizations	1	CR		
3	1	Degree of polymerization and functionality	1	CR		
4	6	Plastics: Thermosetting and Thermoplastics – differences	1	CR		
5	3	Compounding of Plastics	1	CR		
7	1	Moulding of plastics 1) Compression, 2) injection moulding	1	CR		
8	2	Moulding of plastics 1) transfer and 2) extrusion moulding	1	CR		
9	6	Preparation of PE, PVC, Teflon, Bakelite, Nylon, Polyesters		CR		
10	3	Properties of PE, PVC, Teflon, Bakelite, Nylon, Polyesters	1	CR		
11	1	Uses of PE, PVC, Teflon, Bakelite, Nylon, Polyesters	1	CR		
13	2	Manufacture of Portland cement	1	CR		
14	6	Chemical constitution of Portland cement	1	CR		
15	3	Setting and Hardening of Portland Cement	1	CR	1 st Unit Will Be Completed	
19	1	Classification of cement	1			
14	2	Introduction to Water technology: Hardness of Water	2	CR		
15	6	Temporary and Permanent hardness	2	CR		
16	3	Units and inter conversions of Units, Problems on Temporary and Permanent hardness.	2	CR		
17	1	Estimation of hardness by EDTA Method	2	CR		
18	2	1 st Mid Examinations	2	CR		
19	6	1 st Mid Examinations	2	CR		
20	3	1 st Mid Examinations	2	CR		
21	1	Methods of Treatment of Water for Domestic Purposes: Sedimentation, Coagulation, Filtration	2	CR		
	2	Assignment exam		CR		

22	3	Chlorination, Break Point chlorination, Ozonisation	2	CR		
23	1	Industrial Water Treatment – Desalination, Reverse Osmosis Treatment	2	CR		
24	2	Industrial Water Treatment – Lime-Soda Process (Hot Lime Soda and Cold Lime Soda Process)	2	CR		
25	6	Industrial Water Treatment - Zeolite Process,	2	CR		
26	3	Industrial Water Treatment – Ion-Exchange Process	2	CR	2 nd Unit Will Be Completed	
	1	Revision on 2 nd unit		CR		
27	2	Definition, examples of Corrosion	3	CR		
28	6	Types of corrosion: Dry Corrosion and Wet Corrosion	3	CR		
29	31	Principles of corrosion:	3	CR		
30	2	Galvanic series, Galvanic corrosion, Concentration cell corrosion	3	CR		
31	6	Mechanism of Wet Corrosion: Hydrogen evolution Type	3	CR		
32	3	Mechanism of Wet Corrosion: Oxygen Absorption Type	3	CR		
33	1	Factors influencing the rate of corrosion	3	CR		
34	6	Factors influencing the rate of corrosion	3	CR		
35	3	Control of corrosion - proper design, use of pure metal and metal alloys, Passivity	3	CR		
36	1	Control of corrosion - Cathodic Protection – Sacrificial anode and impressed current	3	CR		
37	2	Control of corrosion - Modifying the environment	3	CR		
38	2	Control of corrosion - Use of inhibitors.	3	CR	3 rd Unit Will be completed	
		2 nd Mid Examinations				
		2 nd Mid Examinations				
		2 nd Mid Examinations				
39	3	Introduction to Liquid Fuels	4	CR		
40	1	Classification of Crude Oil	4	CR		
41	2	Fractional Distillation	4	CR		
42	6	Cracking (Thermal & Catalytic)	4	CR		
43	3	Manufacturing of Synthetic Petrol: Fischer-Tropschs Process.	4	CR		
44	1	Manufacturing of Synthetic Petrol: Bergius Process	4	CR		
45	2	Polymerization	4	CR		
46	6	Refining & Reforming	4	CR		
47	3	Knocking –Anti Knocking	4	CR		

		Agents				
48	1	Octane & Cetane Number	4	CR		
49	2	Lubricants: Principle and functions of lubricants, Types of lubricants.	4	CR		
50	6	Mechanism of Lubrication: Thick film or Hydrodynamic lubrication, thin film lubrication	4	CR		
51	3	Extreme pressure lubrication:	4	CR		
52	2	Classification of Lubricants	4	CR		
53	2	Properties of lubricants – Viscosity, flash and fire points.	4	CR		
54	6	Properties of lubricants – cloud and pour points, aniline points	4	CR		
55	3	Properties of lubricants – neutralization number and mechanical strength	4	CR	4 th Unit Will Be completed	
56	1	Solar Energy - Introduction – harnessing solar energy.	5	CR		
57	2	Photo voltaic cells (Construction & Working of PV Cells)	5	CR		
58	6	Concentrated Solar Power Plants	5	CR		
59	3	Green house concept.	5	CR		
60	1	Introduction to Green Chemistry. Principles of Green Chemistry:	5	CR		
61	2	12 principles of Green chemistry and applications	5	CR		
63	2	preparation of few Nano materials: Carbon Nano Tubes, Fullerenes etc	5	CR	5 th Unit will Be completed	
64	3	Applications	5	CR		
65	3	3 rd Mid Examinations	5	CR		
66		3 rd Mid Examinations	5	CR		
67		3 rd Mid Examinations	5	CR		