

LESSON PLAN

Department: ECE

NAME OF THE FACULTY: Ramanaiah Malla

CLASS: 1st ECE_A

BRANCH: ECE

SUBJECT: Engineering Chemistry

Year: 2015-16

SEM: I

Period	Date (Tentative)	Topic	Unit	Teaching Methodology	Remarks	Corrective action upon Review
1	15/09/14	Polymerization reactions, Types of polymerization	1	CR		
2, 3	16/09/14 17/09/14	Basic concepts addition and condensation polymerizations	1	CR		
4, 5	18/09/14 19/09/14	Plastics: Thermosetting and Thermoplastics – differences	1	CR		
6	22/09/14	Compounding of Plastics	1	CR		
7	23/09/14	Moulding of plastics 1) Compression, 2) injection moulding	1	CR		
8	24/09/14	Moulding of plastics 1) transfer and 2) extrusion moulding	1	CR		
9	25/09/14	Preparation of PE, PVC, Teflon, Bakelite, Nylon, Polyesters				
10	26/09/14	Properties of PE, PVC, Teflon, Bakelite, Nylon, Polyesters	1	CR		
11, 12	29/09/14 30/09/14	Uses of PE, PVC, Teflon, Bakelite, Nylon, Polyesters	1	CR		
13	06/10/14	Classification of Cement,	1	CR		
14	07/10/14	Portland cement - raw materials of Portland cement	1	CR		
15, 16	08/10/14 09/10/14	Manufacture of Portland cement				
17	10/10/14	Chemical constitution of Portland cement	1	CR		
18, 19	13/10/14 14/10/14	Setting and Hardening of Portland Cement	1	CR	1 st Unit Will Be Completed	
20	15/10/14	Introduction to Water technology: Hardness of Water	2	CR		
21	16/10/14	Temporary and Permanent hardness	2	CR		
		Units and inter conversions of Units	2	CR		
22, 23	17/10/14 20/10/14	Estimation of hardness by EDTA Method	2	CR		
24	21/10/14	Problems on Temporary and Permanent hardness	2	CR		
25	22/10/14	Problems on Temporary and Permanent hardness	2	CR		
26	24/10/14	Disadvantages of Hard Water	2	CR		
27, 28	27/10/14 28/10/14	Methods of Treatment of Water for Domestic Purposes: Sedimentation, Coagulation, Filtration	2	CR		
29, 30	29/10/14 30/10/14	Methods of Treatment of Water for Domestic Purposes: Disinfection - Sterilization, Chlorination, ,	2	CR		

		Ozonisation				
31	31/10/14	Break Point chlorination				
32, 33	07/11/14 10/11/14	Industrial Water Treatment – Desalination, Reverse Osmosis Treatment	2	CR		
34	11/11/14	Industrial Water Treatment – Lime-Soda Process (Hot Lime Soda and Cold Lime Soda Process)	2	CR		
35	12/11/14	Industrial Water Treatment - Zeolite Process,	2	CR		
36	13/11/14	Industrial Water Treatment – Ion-Exchange Process	2	CR	2 nd Unit Will Be Completed	
37	17/11/14	Definition, examples of Corrosion	3	CR		
38, 39	18/11/14 19/11/14	Types of corrosion: Dry Corrosion and Wet Corrosion	3	CR		
40	20/11/14	Principles of corrosion- Galvanic series,	3	CR		
41	21/11/14	Galvanic corrosion, Concentration cell corrosion	3	CR		
42	24/11/14	Mechanism of Wet Corrosion: Hydrogen evolution Type	3	CR		
43	25/11/14	Mechanism of Wet Corrosion: Oxygen Absorption Type	3	CR		
44	26/11/14	Factors influencing the rate of corrosion	3	CR		
45	27/11/14	Factors influencing the rate of corrosion	3	CR		
46, 47	28/11/14 01/12/14	Control of corrosion - proper design, use of pure metal and metal alloys, Passivity	3	CR		
48, 49	02/12/14 03/12/14	Control of corrosion - Cathodic Protection – Sacrificial anode and impressed current	3	CR		
50	04/12/14	Control of corrosion - Modifying the environment -Control of corrosion - Use of inhibitors.	3	CR	3 rd Unit Will be completed	
51	05/12/14	Introduction to Liquid Fuels	4	CR		
		Classification of Crude Oil	4	CR		
52	08/12/14	Fractional Distillation	4	CR		
53	09/12/14	Cracking (Thermal &Catalytic)	4	CR		
54	15/12/14	Manufacturing of Synthetic Petrol: Fischer-Tropschs Process.	4	CR		
		Manufacturing of Synthetic Petrol: Bergius Process	4	CR		
55	16/12/14	Polymerization	4	CR		
		Refining &Reforming	4	CR		
		Knocking –Anti Knocking Agents	4	CR		
56	17/12/14	Octane & Cetane Number	4	CR		
57	18/12/14	Lubricants: Principle and functions of lubricants, Types of lubricants.	4	CR		
58	19/12/14	Mechanism of Lubrication: Thick film or Hydrodynamic lubrication, thin film lubrication	4	CR		
		Extreme pressure lubrication:	4	CR		

59	22/12/14	Classification of Lubricants	4	CR		
60	23/12/14	Properties of lubricants – Viscosity, flash and fire points.	4	CR		
61	24/12/14	Properties of lubricants – cloud and pour points, aniline points	4	CR		
		Properties of lubricants – neutralization number and mechanical strength	4	CR	4 th Unit Will Be completed	
62	26/12/14	Solar Energy - Introduction – harnessing solar energy.	5	CR		
63	29/12/14	Photo voltaic cells (Construction & Working of PV Cells)	5	CR		
64	30/12/14	Concentrated Solar Power Plants	5	CR		
65	31/12/14	Green house concept.	5	CR		
66	02/01/15	Introduction to Green Chemistry. Principles of Green Chemistry	5	CR		
67, 68	05/01/15 06/01/15	Green synthesis: Engineering Applications in Green Chemistry	5	CR		
69	07/01/15	Introduction to Nano materials: preparation of few Nano materials: Carbon Nano Tubes	5	CR		
70	08/01/15	preparation of few Nano materials: Carbon Nano Tubes, Fullerenes etc.,	5	CR		
71	09/01/15	Top down and Bottom up concepts: Properties of Nano materials- Silver and Gold Nano particles	5	CR		
72	12/01/15	Engineering & Biomedical applications in Nanotechnology	5	CR	5 th Unit will Be completed	