Bhoj Reddy Engineering College for Women: Hyderabad

Department of Basic Sciences

Lesson plan of faculty member for the academic year 2016–17

Class: I B Tech Branch - Section: EEE Semester: I

Subject: Engineering Chemistry Lectures per week: 4 + 1

Lecture Number	Topic to be covered	Date (s)
	UNIT-I Water and its Treatment	
1	Hardness of water - causes of hardness Types of hardness : temporary & Permanent - estimation	9 August 2016
2	Units of hardness-problems	10 August 2016
3	Estimation of hardness of water by complexometric method,	11 August 2016
4	Numerical problems	12 August 2016
5	Potable water its specifications-Steps involved in the treatment of potable water	16 August 2016
6	Disinfection of potable water by chlorination and Ozonization	17 August 2016
7	Defluoridation –Nalgonda technique	18 August 2016
8	Determination of F^- ion by ion selective electrode method	19 August 2016
9	Boiler troubles **:** sludge and scales	20 August 2016
10	Caustic embrittlement	23 August 2016
11	Internal Treatment of Boiler feed water: Calgon conditioning-Phosphate conditioning-Colloidal conditioning	24 August 2016
12	Softening of water by Ion exchange process	26 August 2016
13	Desalination of water-Reverse osmosis.	27 August 2016
14	Numerical problems	30 August 2016
15	Sewage water-Steps involved in treatment of sewage.	31 August 2016
	UNIT-II Electrochemistry and Batteries	
16	Electrode-electrode potential, standard electrode potential.	1 September 2016
17	Types of electrodes-Construction	2 September 2016
18	Functioning of Standard hydrogen electrode	3 September 2016
19	Calomel and glass electrode	6 September 2016
20	Nernst equations and its applications.	07 September 2016
21	Electrochemical series and its applications	08 September 2016
22	Electrochemical cells Daniel cell-cell notation, cell reaction and cell emf	09 September 2016
23	Concept of concentration cells-.	10 September 2016
24	Electrolyte concentration problems	13 September 2016
25	Batteries : Cell and battery-Primary battery (dry cell, alkaline cell and Lithium cell)	14 September 2016
26	Secondary battery (lead acid)	15 September 2016
27	Ni-Cd and lithium ion cell	16 September 2016
28	Fuel cells: Hydrogen-oxygen and methanol –Oxygen fuel cell-Applications	17 September 2016
	UNIT-III Polymers	
29	Definition- Classification of polymers with examples	20 September 2016
30	Types of polymerization-addition (free radical addition)	21 September 2016
31	Condensation polymerization with types	22 September 2016
32	Plastics: Definition and characteristics	23 September 2016
33	Thermoplastic and thermosetting plastics,	24 September 2016
34	Compounding of plastics	27 September 2016
35	Fabrication of plastics(compression and injection moulding)	28 September 2016
36	Preparation properties and engineering applications of PVC and Bakelite	29 September 2016
37	Fibers : Characteristics of Fibers - Preparation properties	30 September 2016
38	Applications of Nylon -6,6 and Fiber Reinforced Plastics – Applications	01October2016
39	Rubbers : Natural Rubber and its vulcanization	04 October 2016

40	Compounding of rubber	18 October 2016
41	Elastomers : Characteristics- Preparation properties	19 October 2016
42	Revision	20 October 2016
43	Revision	21 October 2016
44	Conducting polymers : Characteristics and Classification with examples-	22 October 2016
45	Mechanism of conduction in trains-Polyacetylene	25 October 2016
46	Applications of Buna-S, Butyl and Thiokol rubber.	26 October 2016
47	Applications of conducting polymers	27 October 2016
48	Biodegradable polymers : Concept and advantages – Polylactic acid and vinyl alcohol and their applications	28 October 2016
UNIT-IV: Fuels and Combustion		
49	Classification solid fuels analysis of coal proximate	29 October 2016
50	Ultimate analysis and their significance	01 November 2016
51	Liquid fuels petroleum and its refining	02 November 2016
52	Cracking, types ,moving bed catalytic cracking knocking-octane and cetane rating	03 November 2016
53	Synthetic petrol Fischer-Tropsch process	04 November 2016
54	Gaseous fuels- Composition and uses of natural gas LPG and CNG	05 November 2016
55	Combustion : Definition Calorific value of fuel - HCV, LCV	08 November 2016
56	Calculation of air quantity required for combination of fuel.	09 November 2016
UNIT-V: Cement, Refractories Lubricants and Composites		
57	Introduction	10 November 2016
58	Cement : Portland cement its Composition setting and hardening of Portland cement	11 November 2016
59	Special cement: White cement, water proof cement	12 November 2016
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72	Revision	01 December 2016
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75	Revision	06 December 2016

Text books:

1. Engineering Chemistry by B.Rama Devi and Ch.Venkata Ramana Reddy.
2. A text book of Engineering Chemistry by P.C.Jain &Monica Jain.

Name and signature of the faculty: K Sandhya ----

Name and signature of Head of the Department: K Padma ----

Bhoj Reddy Engineering College for Women: Hyderabad

Department of Basic Sciences

Lesson plan of faculty member for the academic year 2016–17

Class: I B Tech Branch - Section: ECE-C Semester: I

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Name and signature of the faculty: K Sandhya ----

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Bhoj Reddy Engineering College for Women: Hyderabad

Department of Basic Sciences

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