

Lesson Plan

Name of Faculty : Ms. Rajni Narang (Theory) Ms. Rajni Narang (Practical)

Discipline : B. Tech

Semester : 2nd

Subject : Chemistry

Lesson Plan Duration : 15 weeks (from January, 2018 to April, 2018)

Work Load (Lecture/ Practical) per week (in hours) : Lectures- 03, Practicals-02

Week	Theory		Practical	
	Lecture Day	Topic (including assignment/test)	Practical Day (2 lectures each day)	Topic
1 st	1 st	Phase Rule: Terminology, examples	1 st	Conductometry
	2 nd	Derivation of Gibbs's Phase rule equation, applications, drawbacks		
	3 rd	One component system (H ₂ O System)		
2 nd	4 th	Two-component system	2 nd	Eutectic point
	5 th	Eutectic system (Pb-Ag)		
	6 th	System with congruent melting point (Zn-Mg)		
3 rd	7 th	Applications of above systems, thermal analysis	3 rd	Preparation of PF and UF Resins .
	8 th	Assignment		
	9 th	Polymers and Polymerization: Introduction & Classification of polymers, effect of structure on properties of polymers biodegradable polymers		
4 th	10 th	Biodegradable polymers, preparation, properties and technical application of thermo-plastics (PVC, PE, Teflon)	4 th	Lab test and viva
	11 th	Thermosets (PF, UF), elastomers (SBR,GR -N)		
	12 th	Silicones, introduction to polymeric composites		
5 th	13 th	Introduction to polymeric composites, problems	5 th	Determination of Alkalinity
	14 th	Assignment		
	15 th	Water Treatment-1: Hardness and its		

		determination(EDTA method), units of hardness		
6 th	16 th	Alkalinity of water	6 th	Determination of Hardness
	17 th	Scale and sludge formation (composition, properties and prevention)		
	18 th	Numerical Problems		
7 th	19 th	Numerical Problems	7 th	Determination of TDS
	20 th	Boiler corrosion, caustic embrittlement		
	21 st	Lime-Soda process, zeolite process		
8 th	22 nd	Ion-exchange process, mixed bed demineralization	8 th	Determination of Dissolved Oxygen
	23 rd	Problems related to above topics		
	24 th	Class Test		
9 th	25 th	Corrosion and Its Prevention: Dry corrosion, Electrochemical theory of corrosion	9 th	Lab test and viva
	26 th	Soil corrosion, microbiological corrosion		
	27 th	Types of corrosion, galvanic corrosion, differential aeration corrosion		
10 th	28 th	Stress corrosion, factors affecting corrosion	10 th	Determination of viscosity by Redwood viscometer
	29 th	Class Test		
	30 th	Lubrication and Lubricants: Definitions and mechanisms		
11 th	31 st	Classification of lubricants, additives for lubricants	11 th	Determination of flash and fire point
	32 nd	Properties of lubricants		
	33 rd	Properties of lubricants, problems		
12 th	34 th	Class Test	12 th	Determination of saponification value
	35 th	Fuels: Definition and characteristics of fuels		
	36 th	Classification and determination of calorific value		
13 th	37 th	Proximate analysis of fuel and its importance	13 th	Revision
	38 th	Ultimate analysis of fuel and its importance		
	39 th	Merits and demerits of gaseous fuel over other varieties of fuel		
14 th	40 th	Composition, properties and uses of water gas, oil gas	14 th	Revision
	41 st	Biogas, LPG, CNG		
	42 nd	Numericals , Problems related to above topics		
15 th	43 rd	PPT	15 th	Lab test and viva
	44 th	PPT		
	45 th	Discussion of previous year papers		

