

Lesson Plan

Name of the Faculty: Shalu Garg (Theory and Practical)

Disciplines: Mechanical

Semester: 2nd

Subject: Applied Chemistry

Lesson Plan Duration: 15 Weeks (From January 2018 to April 2018)

Lecture Load per week (in hours): Theory (03)+ Practicles (06)

WEEK	THEORY		Practical	
	Lecture Day	Topic	Practical Day	Topic
1st	1st	General Metallurgical Terms and Introduction	1st	Gravimetric analysis and apparatus used in Gravimetric analysis
	2nd	Operations with Reference to Iron		
	3rd	Operations with Copper and Aluminium		
2nd	1st	Revision	2nd	Determination of %age purity of commercial sample of blue vitriol using $N/20 Na_2S_2O_3$
	2nd	Manufacture of Steel-Open Hearth Process		
	3rd	Definitions- Alloys and Purpose of Alloying		
3rd	1st	Type of Alloys, Properties and Applications of Ferrous Alloys- Invar	3rd	Students' performance in the laboratory and viva-voce
	2nd	Properties and Applications of Nichrome, Stainless Steel, Alnico		
	3rd	Properties and Application of Non-Ferrous Alloys- Brass, Bronze		
4th	1st	Properties and Applications of Duralumin, Magnalium and Solder	4th	Determination of %age Composition of Volatile/ non-volatile matter in the given coal sample
	2nd	Problems Related to 1st Unit; Definition of Corrosion and its Types		
	3rd	Factors Affecting Corrosion Rate and Theories of Corrosion- Chemical Corrosion		
5th	1st	Wet Corrosion in Acidic Atmosphere by H_2 Evolution Mechanism	5th	viva-voce
	2nd	Definition of Passivity in Metals as per Galvanic series; Metal Coating-Cathodic Protection, Impressed Current Voltage, Cementation		

12th	1st	Composition and Application of Borosilicate and lead glasses	12th	To study the effect of metal Coupling on Corrosion of Iron
	2nd	Definition, constituents and advantages of Paint, Varnish		
	3rd	Definition, constituents and advantages of enamels; Problems solving class		
13th	1st	Definitions- Polymer, Monomer and degree of Polymerization, Brief introduction to addition and Condensation Polymers with Suitable examples (PVC, PE, PS)	13th	Detection of Iron Metal in the given solution of Rust
	2nd	Examples of Polymer- Teflon, Nylon-66 and Bakelite; Problem Solving class		
	3rd	Plastics- Definition and their types (Thermoplastic and thermosetting plastics)		
14th	1st	Problem Solving Class	14th	viva-voce
	2nd	Applications of Polymers in Industry and Daily Life		
	3rd	Revision		
15th	1st	Revision	15th	viva-voce
	2nd	Test and Assignment		
	3rd	Problem Solving Class		