Lesson Plan (2nd Sem)

Discipline : Applied Science, Name of faculty: Ms Anita Kumari

2nd semester (ceramic engineering)

Subject: Chemistry Application

Lesson plan duration : 15 weeks

work load : Theory 03, Practical 02

Week	Theory		Practical	
	Lecture day	**Topic (including assignment/test)**	**Practical day**	**Experiment Name**
1st	1	Unit 1: Defination of symbol, formula, valency and chemical equation	1&2	Experiment 1: Crysttalization of a sample of alum.
	2	Atomic mass and molecular masses, mole concept and molar mass .		
	3	Writing of the chemical formula of a simple chemical compound.		
2nd	4	Emperical and molecular formula.	3&4	Exp 2: Separation of constituents of an inorganic mixture by paper chromatography.
	5	Calculation of percentage composition of a chemical compound.		
	6	Essentials of a chemical equation		
3rd	7	Balancing if chemical equation by hit and trial method.	5&6	Practice of 1&2
	8	Exothermic and endothermic equations.		
	9	revision of unit 1		
4th	10	Test of unit 1	7&8	Exp3 : Separation of components of ink.
	11	1st sessional test		
	12	Unit 2: Calorific value, determination of calorific value by bomb calorimeter.		
5th	13	Combustible and non combustible constituents of coal.	9&10	Exp 4 : To prepare collidal solution of starch.
	14	Proximate analysis of coal.		
	15	Manufacture , properties and uses of water gas and producer gas.		
6th	16	Manufacture , properties and uses of biogas.	11&12	practice of 3&4
	17	revision of unit 2		
	18	test of unit 2		
7th	19	Unit 3: Phase rule, terminology related to phase rule.	13&14	Exp 5: To prepare colloidal solution of ferric hydroxide.
	20	Gibb's phase rule, application of phase rule.		
	21	General phase diagrams , concept of fusion/freezing curve.		
8th	22	Vaporization/condensation curve, Sublimation/deposition curve.	15&16	Exp 6: Detection of iron metak in given sample of rust.
	23	Triple point.		
	24	Classification of phase diagrams(Uniary, Binary and ternary.		
9th	25	Test of unit 3	17&18	Practice of 5&6
	26	revision of unit 2&3		
	27	2nd sessional test		
10th	28	Unit 4:physiorption and chemisorption.	19&20	Exp 7: preparation of crystals of Mohr's salt.
	29	Factors affecting adsorption of gases on solids. Difference between absorption and adsorption		
	30	Distinction between true solution , colloids and suspension. lyophilic and lyophobic.		
11th	31	Tyndall effect, Brownian movement.	21&22	Exp 8: Gravimetric estimation of ash content in the given sample of coal
	32	Flocculation , deflocculation and coagulation of colloids.		
	33	Test of unit 4		
12th	34	Unit5: Definition of ceramics, application of ceramics.	23&24	Practice of 7&8
	35	Refractour and composite materials.		
	36	Glass-chemical composition . Application of soda, borosilicates and lead glass.		
13th	37	Definition of paint ,varnished and enamels. constituents and advantages of these organic coating	25&26	Exp 9: Determination of percentage composition of volatile and nonvolatile matter in the given mixture
	38	3rd sessional test		
	39	revision of unit 1 & 2		
14th	40	revision of unit 3& 4	27&28	Exp 10: Gravimetric estimation on moisture in the given sample of coal
	41	revision of unit 5		
	42	Quiz of unit 1		
15th	43	Quiz of unit 2&3	29&30	Final practical test revision
	44	Quiz of unit 4&5		
	45	full syllabus revision		