Lesson Plan

Name of Faculty :Indranil Biswas
Discipline :Ceramic Technology
Semester :2nd Sem.
Subject : Basics of Ceramic Engineering
Lesson Plan Duration : 15 WEEKS
Work Load (Lecture /Practical) per week in hours : Lecture 3 hours Practical 4 hrs

Week	**Theory**		**Practical**	
	Lecture Day	**Topic (Including assignment/test)**	**Practical Day**	**Topic**
1ST	1	Definition, Brief history and development of ceramics.		Observe and record physical properties of minerals: Colour,
	2	Scope of Ceramic Engineering, opportunities in ceramic engineering for diploma holders.		Observe and record physical properties of minerals: Colour,
	3	Traditional Ceramics – White wares (Terracotta, Earthenware),		
2nd	4	Stoneware and Porcelains.		Observe and record physical properties of minerals: lusture, streak.
	5	Cements, Glass.		Observe and record physical properties of minerals: lusture, streak.
	6	Refractories, Abrasives.		
3rd	7	Advanced Ceramic products – Electrical, Electronic &Magnetic,		Observe and record physical properties of minerals hardness,
	8	Automobile Ceramics		Observe and record physical properties of minerals hardness,
	9	Mechanical, Electronics, Chemical,		
4th	10	Bio-Ceramics & Nuclear Ceramic Products.		Observe and record physical properties of minerals cleavage, fracture.
	11	Definition, Classification of Wares: white wares,		Observe and record physical properties of minerals cleavage, fracture.
	12	white wares, heavy clay wares		
5th	13	heavy clay wares.		Observe and record physical properties of minerals tenacity, structure
	14	Raw materials,		Observe and record physical properties of minerals tenacity, structure,
	15	Properties and application.		

6th	16	Definition of refractory, Classification of refractories		Observe and record physical properties of minerals specific gravity.
	17	Classification of refractories (Acidic, Basic, Neutral)		Observe and record physical properties of specific gravity.
	18	Raw material, properties of refractories		
7th	19	general application of refractories.		Microscopic identification of minerals.
	20	General Manufacturing method.		Microscopic identification of minerals.
	21	Definition of cement, Classification ,		
8TH	22	Types of cement,		Microscopic identification of minerals.
	23	Raw material of making cement,		Microscopic identification of minerals.
	24	, General method of making cement,		
9th	25	Properties of cement & uses.		Studyof crystalsystem.
	26	Definition, Types of glass:- container glass,		Studyof crystalsystem.
	27	sheet glass, plate glass, bulb glass,		
10TH	28	Laboratory glass, glass wool etc.		Identification of minerals in hand specimen.
	29	Raw material of glass.		Identification of minerals in hand specimen.
	30	Introduction, classification, Properties Cermets and applications		
11th	31	applications Cermets and applications		Identification of igneous rocks in hand specimen.
	32	Introduction to Earth, The earth as a planet		Identification of igneous rocks in hand specimen.
	33	Important parts of earth		
12th	34	Internal structure of earth.		Identification of Sedimentary rocks in hand specimen.
	35	Work of Atmosphere, Weathering of rocks.		Identification of Sedimentary rocks in hand specimen.
	36	Work of wind erosion, transport of materials, deposition.		
13th	37	Geological work of rivers, erosion, transport and deposition.		Identification of Metamorphic rocks in hand specimen.
	38	Geological work of sea, wave erosion and deposition.		Identification of Metamorphic rocks in hand specimen.

	39	Geological work of glaciers, formation of glaciers.		
14th	40	Igneous Rocks: Formation, composition, structures, texture., Classification of important igneous rocks (Granite, Diorite, Basalt, Hornblende, Obsidian, Pegmatite, Syenite, Gabor, Dolerite).		Determination of specific gravity of minerals.
	41	Brief study of important igneous rocks (Granite, Diorite, Basalt, Hornblende, Obsidian, Pegmatite, Syenite, Gabor, Dolerite).		Determination of specific gravity of minerals.
	42	Sedimentary Rocks Formation, compositions, structures, texture of sedimentary rocks, Classification of important sedimentary rocks (Dolomite, Limestone, Sandstone, Shale).		
15th	43	brief study of important sedimentary rocks(Dolomite, Limestone, Sandstone, Shale).		Determination of Hardness of minerals.
	44	Metamorphic Rocks: Metamorphism, types, Metamorphic rocks: formation, structures and texture, Classification of important metamorphic rocks (Marble, Slate, Soapstone, Quartzite, Gneiss, Phyllite, Schist, Amphibolite).		Determination of Hardness of minerals.
	45	brief study of important metamorphic rocks (Marble, Slate, Soapstone, Quartzite, Gneiss, Phyllite, Schist, Amphibolite).		