WHITEWARE AND GLAZES

Name of Faculty : M.M.EQBAL.
Discipline : CERAMIC ENGINEERING
Semester : 5TH SEM.
Subject : 5.3 WHITEWARE AND GLAZES
Lesson Plan Duration : 16 WEEKS
Work Load (Lecture /Practicle) per week in hours : Lecture : 3 Practicle 4

Week	Theory		Practicle	
	Lecture Day	Topic (Including assignment/test)	Practicle Day	Topic
1	1	BODY FORMATION: EARTHEN WARE, FINE EARTHEN WARE	1	Prepare porcelain ware body.
1	2	COMMON EARTHEN WARE GLAZE TILE(FLOOR AND WALL), EARTHEN WARE SANITARY WARE	2	Prepare porcelain ware body.
1	3	STONE WARE ,FINE STONE WARE COARSE STONE WARE		
2	4	VITREOUS CHINA ,SANITARY WARE	1	Prepare different types of ceramic stains.
2	5	CHEMICAL STONEWARE, ACID RESISTANCE BRICKS AND TILE	2	Prepare different types of ceramic stains.
2	6	PORCELAIN WARE, HARD PORCELAIN,SOFT PORCELAIN		
3	7	CHEMICAL PORCELAIN, ELECTRICAL PORCELAIN, BONE CHINA AND FRITTED CHINA	1	Prepare of colored glazes and its application.
3	8	DENTAL PORCELAIN, HEAVY CLAY WARE:- TERRACOTA BODY	2	Prepare of colored glazes and its application.
3	9	COMMON BUILDING BRICKS, PAVING BRICKS,FACE BRICK		
4	10	COMMAN BUILDING TILES, SALT GLAZE STONE WARE PIPES	1	List out and study various defect like pinhole, chipping , dunting , etc. in ceramic product and its remedy.
4	11	MANUFACTURING, PROPERTIES&APPLICATIONS OF FLOOR TILES	2	List out and study various defect like pinhole, chipping , dunting, etc. in ceramic product and its remedy.
4	12	WALL TILES AND INSULATORS-LOW TENSION AND HIGH TENSION		
5	13	FACTORS AFFECTING STRENGTH OF PROCELAIN INSULATORS	1	Determination of thermal shock resistance of a given sample .
5	14	FACTORS AFFECTING BREAKDOWN OF ELECTRIC INSULATORS	2	Determination of thermal shock resistance of a given sample
5	15	LOW ALKLI PORCELAIN AS A RESISTOR CARRIER		
6	16	DEMONSTRATE INSULATOR TEST	1	Determination of abration resistance of a given sample
6	17	HAMMER TEST	2	Determination of abration resistance of a given sample
6	18	TENSILE STRENGTH FOR HIGH TENSION INSULATORS		
7	19	TENSILE STRENGTH FOR LOW TENSILE INSULATORS	1	Determination of impact and chipping resistance of a given

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				sample .
7	20	REVISION OF UNIT 1 AND UNIT 2	2	Determination of impact and chipping resistance of a given sample .
7	21	Sessional test 1as per HSBTE Calendar		
8	22	Concept of quality control and quality assurance, Inspection and its significance	1	Determination of acid resistance of given sample.
8	23	Concept of process and final inspection, Properties and tests:- loss and ignition	2	Determination of acid resistance of given sample
8	24	Water of plasticity, thermal shock resistance		
9	25	Corrosion resistance, water absorption	1	Application and firing of transfer print .
9	26	M.O.R, tensile and compressive strength	2	Application and firing of transfer print .
9	27	Crazing and delayed crazing test, determination of drying and firing shrinkage		
10	28	Practicle control of slip properties	1	Study the milling of enamel and glaze in pot mill.
10	29	Define glaze & classification of glaze, various types of glaze	2	Study the milling of enamel and glaze in pot mill.
10	30	Raw materials and their influence on glaze, preparation of glaze		
11	31	Glaze frit & its preparation, different glaze application methods	1	Application of glaze frit by dipping and spraying.
11	32	Classification of decoration's, decorations methods	2	Application of glaze frit by dipping and spraying.
11	33	Definition of molecular weights, calculation of molecular weights of ceramic raw materials		
12	34	Glaze/glass compositions: segar unity formula	1	To determine residue of glaze / body and slip.
12	35	Percentage composition and empirical formula, various tests of glaze	2	To determine residue of glaze / body and slip.
12	36	Glaze procedures, method of controlling gloss		
13	37	Sessional test-2 as per HSBTE academic calendar	1	To determine viscosity of slip.
13	38	Ceramic colour and decoration :- introduction :raw materials used for manufacturs colours,	2	To determine viscosity of slip.
13	39	Properties and function ofraw materials, method of manufacturing ,factor affecting their properties of ceramic colours		
14	40	Preparation of ceramic coloursfor decorationof ceramicarticles	1	Revsion of Pratical

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14	41	factor affecting decoration	2	Revsion of Pratical
14	42	Defect:-, cause and remedy of crawling , pinholes, peeling,		
15	43	crazing, spit out, dunting , blistering , sulpering , rolling , chipping, crack,fish scaling	1	Revsion of Pratical
15	44	, hair linning,. Jumping off , roboiling rusting	2	Revsion of Pratical
15	45	Tearing and warping etc.		
16	46	Health and safety with glaze materials:-	1	Revsion of Pratical
16	47	Labeling of hazards materials , ceramic materials hazards	2	Revsion of Pratical
16	48	Recommended health and safety procedure and disposal of waste materials.		