AMCT15 GLAZE TECHNOLOGY

UNIT-1 INTRODUCTION TO GLAZE

1.1 Definitions- composition of glaze
1.2 Classification of different types of glazes- engobe- frit preparation- frit rules
1.3 Compounding of lead and leadless glazes, alkaline glazes,
1.4 Calcarious glazes and feldspatic glazes.

UNIT-2 RAW MATERIALS AND PROCESSING

2.1 Glaze raw materials- effect of individual materials
2.2 Opacifiers- colouring agents- stains- mixed colours
2.3 Metallic lusture- unit operations and processes-
2.4 Glaze properties- grain size- specific gravity
2.5 Viscosity- glaze control- additives
2.6 Glaze suitability- fired properties of glazes.

UNIT-3 GLAZING TECHNIQUES AND SPECIAL GLAZES

3.1 Glazing techniques- dipping, pouring,
3.2 Spraying, brushing, dusting and other techniques
3.3 Special glazes- matt glazes, snake skin glazes,
3.4 Crackled glazes, salt glazes and other glazes.

UNIT-4 PROPERTIES AND DEFECTS

4.1 Glaze body reactions- interface layers
4.2 Thermal characteristics- mechanical, optical and chemical properties of glazes
4.3 Glaze defects and remedies- crazing, peeling,
4.4 Crawling, rolling, blisters, pin holes, dunting.

UNIT-5 DECORATION

5.1 Classification of decoration methods
5.2 Advantages- different decorating techniques
5.3 Painting, spraying, stenciling, stamping, printing, lithographic transferring,
5.4 Silk screen printing, dusting, engobing,
5.5 Liquid gold decoration and decoration techniques.

References Books:

1. Emmanuel Cooper, The Potter Book of Glaze Recipes, B.T.Batsford Ltd., London, 1986.
2. Hiraoki Yanagida, The Chemistry of Ceramics, John Wiley and Sons, 1996.
3. Terpstra, Ceramic Processing, Chapmann and Hall, 1995.