

AMCT12 TRADITIONAL CERAMICS

UNIT-1 INTRODUCTION

- 1.1 History- definition- whiteware-
- 1.2 Heavy clayware- classification- raw materials,
- 1.3 Batch calculation, mixing, forming,
- 1.4 Drying, firing, glazing, decoration.

UNIT-2 BODY FORMULATIONS

- 2.1 Body composition- porcelain, earthenware,
- 2.2 Bone china, sanitary ware, hotel china,
- 2.3 Terracotta, majolica, steatite bodies, cordierite bodies,
- 2.4 Rutile bodies, titanate bodies, zircon bodies, lava bodies.

UNIT-3 WHITEWARE PRODUCTS

- 3.1 Manufacturing process & properties-
- 3.2 Whitewares at home- tableware, kitchenware,
- 3.3 Flame resistant ware, art ware, containers, construction
- 3.4 Floor tile, wall tiles, sanitary ware, electrical
- 3.5 Low tension insulators, high tension insulators,
- 3.6 High frequency low loss insulators, industrial use
- 3.7 Abrasion resistance, chemical resistance, heat resistance.

UNIT-4 HEAVY CLAYWARE PRODUCTS

- 4.1 Introduction- classification- body composition
- 4.2 Properties and applications of heavy clayware
- 4.3 Products- face bricks, paving bricks, hollow bricks, roofing tiles,
- 4.4 Sewer pipes, stoneware pipes, floor tiles, vitrified tiles.

UNIT-5 PROPERTIES & TESTING

- 5.1 Strength- tensile, flexural, impact-
- 5.2 Absorption & porosity- moisture expansion
- 5.3 Thermal expansion- thermal shock resistance
- 5.4 Heat conductivity- abrasion resistance
- 5.5 Chipping resistance- chemical durability
- 5.6 Electrical properties
- 5.7 Dielectric strength, dielectric constant, power & loss factor, volume resistivity.

References Books:

1. F.Singer & S.Singer, Industrial Ceramics, Oxford & IBH Publishing Co, 1991.
2. Mohamed N.Rahaman, Ceramic Processing, Taylor & Francis, 2007.
3. Rexford Newcomb Jr, Ceramic Whitewares : History, Technology and Applications, Pitman Publishing Corporation, 1947.