

## **Building Materials, Construction Planning** (Code No: A40109)

### **UNIT - I**

**Stones and Bricks, Tiles:** Building Stones - Classification and quarrying - properties - structural requirements - dressing Bricks - Composition of Brick earth - Manufacture and Structural requirements.

**Wood, Aluminum, Glass and Paints:** Wood - Structure - Types and Properties - Seasoning - defects; alternate materials for wood - GI/fiber - reinforced glass bricks, steel and aluminum.

### **UNIT - II**

**Cement & Admixtures:** Ingredients of cement, manufacture - Chemical composition - Hydration - field and lab tests Admixtures - mineral & chemical admixtures - uses.

### **UNIT - III**

**Building Components:** Lintels Arches, walls, vaults, stair cases - types of floors - types of roofs - flat, curved, trussed; foundations - types; Damp Proof Course; Joinery - doors - windows - materials - types.

**Building Services:** Plumbing Services; Water Distribution, Stationery - Lines & Fitting; Ventilations: Functional requirements systems of ventilations. Air-conditioning - Essentials and Types; Acoustics - characteristic - absorption - Acoustic design; Fire protection - Fire Hazards - Classification of fire resistant materials and constructions.

### **UNIT - IV**

**Masonry and Finishing's:** Brick Masonry - types - bonds; Stone masonry - types; Composite Masonry - Brick - Stone - composite; Concrete, Reinforced brick

Finishers: Plastering, Pointing, Painting, Claddings - Types - Tiles - ACP

**Form work:** Requirements - Standards - Scaffolding - Design; Shoring - Underpinning.

### **UNIT - V**

**Building Planning:** Principles of Building Planning, Classification of buildings and Building by laws