

CE/BOS/CE C201/0210

K L UNIVERSITY
BUILDING MATERIALS AND BUILDING CONSTRUCTION (CE C 201)

SYLLABUS

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UNIT – 1 Stones: Classification of Stones; Qualities of a good building stone; Stone quarrying; Dressing of stones; Common building stones of India.

Bricks: General; Composition of good brick earth; Harmful ingredients in brick earth; Manufacture of bricks; Comparison between clamp burning and kiln burning; Qualities of good bricks; Classification of bricks; Size and weight of bricks; Fire – clays.

UNIT-2 Lime: General; Some definitions; Sources of lime; Constituents of lime stones; Classification of limes; Comparison between fat lime and hydraulic lime; Manufacture of fat lime; Manufacture of natural hydraulic lime.

Timber: Definition; Structure of a tree; Defects in timber; Qualities of good timber; Preservation of timber; Seasoning of timber; Market forms of timber, Alternative materials for wood, galvanized iron, fiber reinforced plastics, steel and aluminum.

UNIT-3 Steel: General; Manufacture of steel; Uses of steel; Defects in steel; Market forms of steel; Properties of mild steel; Properties of hard steel; Corrosion of ferrous metals.

Paints: Constituents of paints, types of paints, Painting of new and old substrate Painting; white washing, Varnishing; Distempering.

Insulating Materials: General, thermal insulators, electrical insulators and sound (acoustic) insulators

UNIT-4 Brick Masonry: Technical terms; Types of bonds in brickwork and their suitability.
Stone Masonry: Technical terms; Classification of stone masonry.

UNIT – 5 Dampness and Damp Proofing: Introduction, Methods of preventing dampness; Damp proofing materials and their classification; Methods of providing DPC under different situations.

Floors: Technical terms; Different types of floors – concrete, mosaic, terrazzo, stone floors, ceramic tile floors , vinyl floors and wood floors.

Roofs: Technical terms; Classification of roofs; Steel sloping roofs; Roof covering materials; Types of flat roofs.

Scaffolding, Shoring, Under Pinning and Form Work: Types of scaffolding; Types of shoring; Methods of underpinning; Types of formwork; Centering

TEXT BOOKS:

1. Building Materials by S. K Duggal New Age International Publishers.
2. Building construction by P C Varghese, Prentice hall of India (P) Ltd, New Delhi

REFERENCES:

1. Civil engineering materials by Parbin Singh Prentice hall of India (P) Ltd, New Delhi
2. Building construction by B. C Punmia, Laxmi Publications, New Delhi