

CE/BOS/CE E32/0210

K L UNIVERSITY

LOWCOST HOUSING (09 – CE E32)

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SYLLABUS

UNIT – 1 Housing Scenario

Status of urban housing- Status of Rural Housing

Housing Finance: Introducing- Existing finance system in India- Government role as facilitator- Status at Rural Housing Finance- Impedimently in housing finance and related issues

UNIT-2 Land Use and Physical Planning for Housing:

Planning of urban land- Urban land ceiling and regulation act- Effectinecy of building bye laws - Residential Densities

Housing the Urban Poor: Living conditions in slums- Approaches and strategies for housing urban poor

UNIT-3 Development and Adopt On Of Low Cost Housing Technology

Adoption of innovative cost effective construction techniques- Adoption of precast elements in partial prefabrication- Adopting of total prefabrication of mass housing in India- General remarks on pre cast roofing/flooring systems- Economical wall system- Single Brick thick loading bearing wall- 19cm thick load bearing masonry walls- Half brick thick load bearing wall- Fly ash, gypsum thick for masonry- Stone Block masonry- Adoption of precast R.C. plank and join system for roof/floor in the building

Alternative Building Materials for Low Cost Housing: Substitute for scarce materials- Ferro cement- Gypsum boards- Timber substitutions- Industrial wastes- Agricultural wastes

UNIT- 4 Low Cost Infrastructure Services

Present status- Technological options- Low cost sanitation's- Domestic wall- Water supply- energy

Rural Housing: Introduction- traditional practice of rural housing continuous- Mud Housing technology- Mud roofs- Characteristics of mud- Fire resistant treatment for thatched roof- Soil stabilization- Rural Housing programs

UNIT-5 Housing in Disaster Prone Areas

Earthquake- Damages to houses- Traditional Houses in disaster prone areas Type of Damages and Railways of non-engineered buildings- Repair and restore action of earthquake Damaged non-engineered buildings recommendations for future constructions- Requirement's of structural safety of thin precast roofing units against - Earthquake forces- Status of R&D in earthquake strengthening measures- Floods- cyclone- future safety

TEXT / REFERENCE BOOKS:

1. Building materials for low –income houses – International council for building research studies and documentation.
2. Hand book of low cost housing - by A. K. Lal – Newage international publishers.
3. Light weight concrete- Academic Kiado- Rudhai. G – Publishing home of Hungarian Academy of Sciences 1963.
4. Modern trends in housing in developing countries – A.G. Madhava Rao- D.S. Ramachandra Murthy & G. Annamalai