

# **AMC-7 BUILDING CONSTRUCTION**

## **UNIT-1 FOUNDATION**

- 1.1 General Discussion, Assessment Of Allowable Soil Pressure, Settlement In Clay, Settlement In Sand, Differential Settlement, Types Of Foundations,
- 1.2 Deep Foundations, Pile Foundations, Well Foundations And Caissons, Foundations In Special Conditions Foundation Failures,
- 1.3 Durability Of Foundation, Excavations For Foundation Trenches And Basements, Dewatering Of Foundation Excavations,
- 1.4 General Procedure in Foundation Design, Cofferdams, Circular Cellular Cofferdam.

## **UNIT-2 ACOUSTICS AND SOUND INSULATION**

- 2.1 General Discussion And Scope Of Study, Acoustics Of Buildings, Sound Insulation Of Buildings, Characteristics Of Audible Sound,
- 2.2 Rating Of Intensity Levels Of Sound Or Noises (In Decibels Or Db), Behaviour Of Sound And Its Effects (Or Principles Of Acoustics),
- 2.3 Absorption Coefficients For Important Surfaces, Acoustical Defects, General Remarks On Reverberation Time And Audience Factor, Acoustics Of Buildings,
- 2.4 Sound Absorbents Or Acoustical Materials, Sound Insulation Of Buildings, Transmission Of Noise, Sound Insulation Vs. Sound Absorption,
- 2.5 Transmission Loss, Maximum Acceptable Noise Levels

## **UNIT-3 VENTILATION, AIR-CONDITIONING AND THERMAL INSULATION**

- 3.1 General Remarks, Ventilation, Definitions And Necessity Of Ventilation, Functional Requirements Of A Ventilation System, Systems Of Ventilation And Their Choice,
- 3.2 General Considerations And Rules For Natural Ventilation Air-conditioning Of Buildings, General-Purposes And Classification,
- 3.3 Principles Of Comfort Air-Conditioning, Comfort Air-Conditioning Under Indian Conditions, Systems Of Air –Conditioning, Essentials Of An Air-Conditioned System,
- 3.4 Air Pumps, Thermal Insulation Of Buildings (Or Heat Insulation Of Buildings), General Discussion And Definitions Of Terms,
- 3.5 General Principles Of Thermal Insulation, Heat Insulating Materials Or Material, Of Heat Insulation, Values Of Density,
- 3.6 Thermal Conductivity And Thermal Resistivity Of Some Building And Insulating Materials, Methods Of Heat Insulation Or Thermal Insulation

## **UNIT-4 STRUCTURAL STEEL WORK**

- 4.1 General Principles Of Steel Work, Rolled Steel Sections Or Sections In Steel Work, Methods Of Connecting Steelwork, Structural Steel Members And Their Interconnection,
- 4.2 Important Considerations In Fire Protection, Properties Of Fire-Resisting Materials, Fire-Resistant Construction, General Measures Of Fire Safety In Buildings

## **UNIT-5 MISCELLANEOUS STRUCTURES**

- 5.1 General, Shell Structures, Folded Plate Structures, Skeletal Space-Frame Structures, Pneumatic Structures, Grain Storage Structures,  
5.2 Prefabricated Structures, Fireplaces And Flues, R.C.C. Chimneys, Earthquake-Resistant Structures, Modified Mercalli Intensity Scale (Abridged)

## **UNIT-6 CONSTRUCTION MANAGEMENT, CONTROL AND VALUATION OF A BUILDING**

- 6.1 Objects Of Planning, Construction Stages, Construction Operation, Construction Schedules, Bar Chart, Milestone Chart, Definitions, Pert Network, Cpm Network,  
6.2 Explanation Of Table, Cost Analysis, Value Engineering Manpower And Materials Requirements In Buildings, Job Layout For Building,  
6.3 Project Supervision, Project Control During Construction, Construction Contracts, Management Techniques For Rural Housing Development In India,  
6.4 Demolition Works In Buildings, Building Disaster Management, Environmental Impact Management

### **Reference books:**

1. Building Construction by B C Punmia and Ashok Kumar Jain
2. Building Materials by S K Duggal
3. Building Construction by Varghese P C

