

CN5004 SYSTEM INTEGRATION IN CONSTRUCTION

DETAILED SYLLABUS

OBJECTIVES

To study and understand the construction system integration, environmental factors, services, maintenance and safety systems.

UNIT I STRUCTURAL INTEGRATION

Structural System, Systems for enclosing Buildings, Functional aesthetic system, Materials Selection and Specification.

UNIT II ENVIRONMENTAL FACTORS

Qualities of enclosure necessary to maintain a specified level of interior environmental quality– weather resistance – Thermal infiltration – Acoustic Control – Transmission reduction – Air quality – illumination – Relevant systems integration with structural systems.

UNIT III SERVICES

Plumbing – Electricity – Vertical circulation and their interaction – HVAC.

UNIT IV MAINTENANCE

Component longevity in terms of operation performance and resistance to deleterious forces- Planning systems for least maintenance materials and construction– access for maintenance- Feasibility for replacement of damaged components– equal life elemental design maintenance free exposed and finished surfaces.

UNIT V SAFETY

Ability of systems to protect fire – Preventive systems – fire escape system design – Planning for pollution free construction environmental – Hazard free Construction execution.

REFERENCES

1. A.J.Elder and Martiz Vinden Barg, Handbook of Building Enclosure, McGraw-Hill Book Company, 1983.
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3. Jane Taylor and Gordin Cooke, The Fire Precautions Act in Practices, 1987.
4. Peter R. Smith and Warren G. Julian, Building Services, Applied Science Publishers Ltd., London, 1993.
5. William T. Mayer, Energy Economics and Building Design , McGraw-Hill Book Company, 1983.