

SEMESTER – VI

THEORY SUBJECTS

Sl. No.	Sub. Code	Theory	Contact Hours			Credit
			L	T	P/S	
1.	22AR613	Contract Documents & Specifications	3	0	0	3

Course Objective Introduce the concept of material and performance specifications for describing works for effective building contracts.

Anticipated Learning Outcomes: Ability to prepare general and detailed specifications and a contract for a small building project. To impart understanding in the mode of detailed clause by clause specification as complementary to the detailed drawings.

Module 1 What is a Contract? Indian Contract Act, 1872. Notice Inviting Tender, Form of tender, Instruction to tenderers, Article of F2 Agreement, Conditions of Contract, General & Special conditions and annexure.

Module 2 Introduction-Definition-Importance-Scope of the Subject, Specifications forming part of Building Contract, Drafting Specification, Correct form of writing, Avoiding duplication, Ambiguity and conflicting statements. Correct order of sequence. Specification of simple building materials i.e., Brick, Stone, Lime, Cement and Wood etc. Traditional building materials.

Module 3 Detail specification of Excavation in foundation, Plain Cement Concrete, Masonry in Brick and stone (Rubble and Ashlar) Reinforced Cement Concrete work detail specification of all the works related to all civil works.

Module 4 Material Quality and Standard, various Mixes, cutting, bending and fixing of M. S. Bars. Centring and shuttering and its removal. Curing of concrete, flooring, Paving and Tiling, Indian patent Stone, Terrazzo in situ. Flagstone flooring. Waterproofing of structure, Carpentry and Joinery.

Roof work in timber, Panelled door and Glazed window. Specification for Structural steel work, Materials Quality and setting

out. Cutting and welding. Specification of First-class building and Second-class building.

Building Boards. Plywood, Particle Boards, Block boards. Acoustic Boards. Flooring- Asphalt Rubber cork, Linoleum, Parquet etc. Glass – various types of glass used in buildings. Patent Glazing for Factories, Glass bricks, Partition, Pavements lights etc. Paints- Plastic Emulsion paint, metal paints, Cement paint, weather proof paint etc.

Module 5

Standard Specification for different Institutions like PWD, MES, CPWD, BIS etc. Abstract of quantities and writing Schedules, Rate and Material analysis. Bill of quantities.

Note: Most Architectural subjects do not have Textbooks. The Reference books mentioned below are for reference only and University question paper should be prepared from the Syllabus descriptions.

References

1. Birdie, G. S. (2005). *Text Book of Estimating and Costing*. Dhanpat Rai Publishing.
2. Chakraborty, M. *Estimating, Costing, Specification and Valuation*
3. C.P.W.D. *Standard Schedule of Rates*.
4. Khanna, P. N., *Indian Practical Civil Engineers' Handbook*, Engineers' Publishers, Delhi.
5. Rosen, H.J., *Construction Specifications Writing*, John Wiley and Sons, N. York and London.