

AR-124 BUILDING CONSTRUCTION- II :: C-16

Subject Title	:Building Construction - II
Subject Code	:AR-124
Studio Periods/Week	:4
Studio Periods / Semester	:72
Credits	:4
Internal Assignments & Mids	:50 Marks
External Examinations	:50 Marks
Total Marks	:100 Marks
Duration of Exam	:5 Hrs (University Drawing Exam)

TIME SCHEDULE

Sl. No	Major Topics	No. of periods	Weightage of Marks	Short Ans Questions	Essay Questions
			End Exam	End Exam	End Exam
1	Unit-I (Carpentry & joinery)	10	10	1	1
2.	Unit – II (doors)	10	10	1	1
3.	Unit – III (windows)	8	8		1
4.	Unit – IV (steel windows etc.)	10	10	1	1
5.	Unit – V (Wooden ground & upper floors)	8	8		1
6.	Unit – VI (partition walls)	8	10	1	1
7.	Unit – VII (stair cases)	18	18	1	2
	Total:	72	74	5	8

Note: Final exam question paper consists as follows:

1. PART-A for 10 marks which consists 5 short questions all 5 to answer no choice and each one carries 2 marks &
2. PART-B for 40 marks which consists 8 essay questions out of which 5 to answer (3 are choice) and each carries 8 marks.

Course Overview:

The course introduces to the methods and techniques of construction of doors and windows, stairs and partitions of a building using different materials.

Objectives of the Course:

To understand the elementary and simple construction methods like joinery details in wood ,fixing of hardware.

Expected Skills / Knowledge Transferred:

To understand the techniques of constructing doors and windows, staircase and partitions using different materials

Unit – I

Carpentry and joinery: Terms defined; mitring, ploughing, grooving, rebating, veneering. Various forms of joints in wood work, such as lengthening joints, bearing joints, halving, dovetailing, housing, notching, tusk and tenon etc;

Unit – II

Doors: Definition of terms, types of doors: wooden, ledged, ledged and braced, paneled, flush door. Hinged, single and double shutters, sliding, folding, revolving, pivoted.

Unit – III

Windows: Casement, top and bottom hung, pivoted and sliding sash. Hardware: fixtures, locks, hinges, fastenings for doors and windows.

Unit – IV

Steel: windows, rolling shutters and grills. Aluminium doors and windows.

Unit – V

Wooden ground and upper floors: Terms defined, bridging joists, binding joists, binders, beams and girders, solid and herring bone strutting, floor boards, ceiling joists, trimming floors to accommodate fire place. Details of fire place.

Unit – VI

Partition Walls: Brick partition, reinforced brick partition, brick nogged partition, lath and plaster partition, pre-cast concrete partition, glass block and glass create partition, common wooden partition, trussed partition.

Unit – VII

Staircases: Terms defined, Tread, riser, stringer, nosing, flight, landing, head room, handrail, balusters, newel post etc., types of stairs i.e., straight, doglegged, open well, geometrical, circular, spiral, bifurcated, wooden stairs, stone stairs, metal stairs and elementary knowledge of R.C.C. stairs.

Reference Books

- **Barry, R.** The Construction of Buildings Vol. 2, 5th ed. East-West Press. New Delhi, 1999.
- **Bindra, S P. and Arora, S P.** Building Construction: Planning Techniques and Methods of Construction, 19th ed. Dhanpat Rai Pub. New Delhi, 2000.
- **Hailey and Hancork, D.W.** Brick Work and Associated Studies Vol. 2. MacMillan, London, 1979.
- **Moxley, R. Mitchell's** Elementary Building Construction, Technical Press Ltd.
- **Rangwala, S.C.** Building Construction, 22nd ed. Charotar Pub. House, Anand, 2004.
- **Sushil Kumar. T.B.** of Building Construction, 19th ed. Standard Pub, Delhi, 2003.