

SYLLABUS OF BUILDING CONSTRUCTION AND MATERIAL

Unit-I:

Foundations: Necessity and types of R.C.C. foundations, Detail of Deep foundation and precast foundation in general, Details shallow foundations. Bearing capacity of soils and its assessment. Presumptive bearing capacity values from codes. Loads on foundations. Causes of failures of foundations and remedial measures, Foundation on black cotton soils Setting out foundation trenches, excavation timbering of foundation trenches. Load bearing and framed structures.

Unit-II

Brickwork: Qualities of good bricks, classification of bricks tests on bricks as per as codes. Terms used in brickwork, commonly used types of bonds in brickwork such as header, stretcher, English and Flemish bonds, principles of construction. Reinforced brickwork, brick knogging. Parapets, copings, sills and corbels, brief introduction to cavity walls, load bearing and partition walls. Masonry construction using cement concrete blocks and clay walls, load bearing and partition walls. Masonry construction using cement concrete blocks and clay blocks. Precast construction: Introduction to method and materials. Precast elements likes poles, cover, jallies, steps corbels, truss element etc.

Unit-III:

Stone Work: Stones, cutting and dressing, selection of stones types of stone masonry, principles of construction joints in masonry. Lifting heavy stones, common building stones in India. Arches and Lintels: Terminology in contraction, types chajjas and canopies, pre cast Lintels & Arches. Damp Proofing: Causes and effect of dampness. Various methods of damp proofing Damp proofing in plinth protection, New Techniques of Damp Proofing Damp Proofing in Plinth Protection, New Techniques of Damp proofing. Epoxy etc.

Unit-IV

Floors and Roofs: Floors: General Principals, types and method of construction, floors finished quality, testing floor tiles, synthetic & Ceramic Tiles.

Roofs: Flat and pitches roofs, roof coverings, types AND their constructional features. Thermal Insulation

Unit-V:

Stairs: Types of stairs, functional design of stairs.

Doors and Windows: Purpose materials of construction and types.

Unit-VI:

Plastering and Pointing: Necessity, types and methods Temporary Timbering: Centering and formwork shoring, underpinning and scaffolding. Painting: White washing, colour washing and distemping new materials & Techniques.