

31034 CIVIL ENGINEERING DRAWING - I

DETAILED SYLLABUS

Unit I CONVENTIONS, SYMBOLS:

1. General – Conventions- Title block- Scales- Line work- Lettering- Symbols- Abbreviations

2. BUILDING BYE-LAWS AND SUBMISSION OF DRAWINGS

Objects of bye-laws- Importance of bye-laws- Function of local authority- Setbacks- Plot Coverage- Number of floors- Height of building- Built up Area- Floor space index (FSI) - Views and details necessary for the preparation of a civil engineering drawing- Site Plan – Necessity for Approval of plans from local body- Layout plan and key plan- Requirements for submission of drawing for approval.

Unit II PLANNING OF BUILDING

1 PLANNING OF RESIDENTIAL BUILDINGS

Types of residential buildings- Usual requirements-Types of Rooms – Minimum Size requirement for each type of rooms Furniture arrangement in each room- Position of stairs / lifts- Position of Doors/ Windows House drainage and Sanitary fittings – Sump/Water tanks- Plumbing Pipes -Preparation of line drawing for given requirements with dimensions, not to scale.

2 PLANNING OF INDUSTRIAL STRUCTURES Planning aspects - Requirements of industrial units - Sheets for pitched roof coverings – Rolling Shutters - Ramps- Stores- Public Toilets/ Bath rooms- Dining / Resting halls- Ventilation and Lighting - Preparation of line drawing for given requirement with measurements (not to scale).

3 PLANNING OF PUBLIC BUILDINGS Types of public buildings - Miscellaneous public buildings - General requirements of Public Buildings -Landscape architecture-Preparation of line plan with dimensions for the given requirements (not to scale).

Unit III BASIC DRAWINGS

Draw the elevation of : 1) Fully panelled double leaf door. 2) Fully Panelled single leaf door 3) Flush door 4) Fully Panelled window with grill 5) Partly glazed and partly panelled window 6) Lean- to – roof 7) King post roof truss 8) Steel roof truss 9) Rain water Harvesting– Recharging into the ground (a) Shallow well system (b) Percolation pit system.

Unit IV BUILDING DRAWINGS

Preparation of plan, section and elevation of buildings with specifications for the given line drawing to suitable Scale: 1. A Reading room with R.C.C flat roof 2. A House with single bed room and attached bathroom with R.C.C. flat roof. 3. A residential building with two bed rooms with R.C.C. flat roof 4. A house with single bed and hall with partly tiled and partly R.C.C flat roof. 5. A Two roomed house with RCC slope roof with gable ends 6. A House with fully tiled roof with hips and valleys 7. A Small workshop with north light steel roof truss (6 to 10m Span) over R.C.C.Columns. 8. A Primary health center for rural area with R.C.C roof. 9. A Village Library building with R.C.C flat roof 10. A small Restaurant building with R.C.C flat roof 11. A Single storeyed School building with R.C.C flat roof 12. A Bank building with R.C.C flat roof

Reference Book :

1. National Building Code (NBC-2012) 2. TamilNadu District Municipal building rules and by-laws 3. B.P. Verma ,”Civil Engineering Drawing and house planning” 4. Dr N. Kumaraswamy and A. Kameswara Rao,” Building Planning and Drawing”, 5. G. Vaidhyanathan, I. Kulasekaran, G. sathish Kumar “Building Planning and Construction Companion”, 6. S.C.Rangwala ,”Civil Engineering Drawing “, 7. V.R.Thothathri, “A Guide to Civil Engg Drawing.