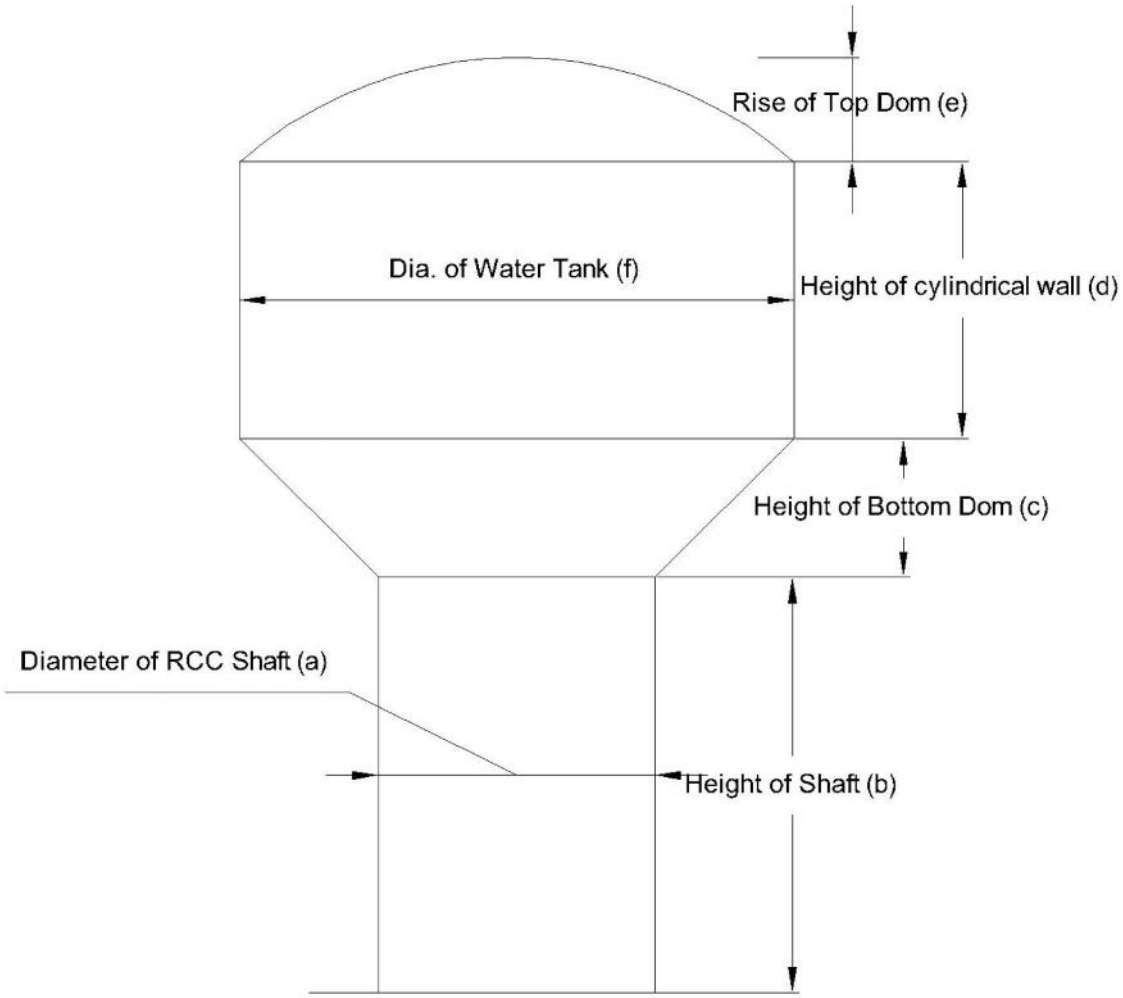
Group ID	Class	Roll No.
C-1	BX, BY, BZ	101,106,111,116,121,126,131,136,141,146,151,156,161,201,206,211, 216,221,226,231,236,241,246,251,256,261,301,306,311,316,321,326, 331,336,341,346,351,356,361
C-2	BX, BY, BZ	102,107,112,117,122,127,132,137,142,147,152,157,162,202,207,212, 217,222,227,232,237,242,247,252,257,302,307,312,317,322,327,332, 337,342,347,352,357
C-3	BX, BY, BZ	103,108,113,118,123,128,133,138,143,148,153,158,163,203,208,213, 218,223,228,233,238,243,248,253,258,303,308,313,318,323,328,333, 338,343,348,353,358
C-4	BX, BY, BZ	104,109,114,119,124,129,134,139,144,149,154,159,204,209,214,219, 224,229,234,239,244,249,254,259,304,309,314,319,324,329,334,339, 344,349,354,359
C-5	BX, BY, BZ	105,110,115,120,125,130,135,140,145,150,155,160,205,210,215,220, 225,230,235,240,245,250,255,260,305,310,315,320,325,330,335,340,3 45,350,355,360

Assignment :- 1 Wind Force Analysis

1. A building of size (a) _____ has (b) _____ columns of size 450 mm x 450 mm, spaced at(C) _____ m c/c. Assume 230 mm thick brick masonry wall on periphery only and no internal walls. The building has(d) _____ stories of (e)_____ m each. The plinth level of RCC slab and beam is at 1.0 meter above G.L and footing is provided at 2meter below G.L. Consider beam size 230 mm x 600 mm in both direction and slab thickness 150 mm. Consider L.L = 4 kN/m2and F.F = 1.0 kN/m. The building is located in Vadodara. Calculate wind forces on any one internal frame using IS 875.

Group ID	Size of Building (a)	No. of Column (b)	Spacing of Column (c)	No. of Story (d)	Height of Story (e)
C-1	15m X 15m	16	5 m	4	3 m
C-2	16m X 16M	25	4 m	5	3.5 m
C-3	17m X 17m	25	4.25	6	4 m
C-4	18m X 18m	16	4.5 m	4	3 m
C-5	14m X 14m	25	3.5 m	5	3.5 m

2. Calculate design wind pressure on a circular overhead water tank of intze type, supported on an RC shaft staging as shown in figure. The tank is proposed to be construct in a residential locality of Rajkot.



Group ID	Dia. Of RCC Shaft (a)	Height of Shaft (b)	Height of Bottom Dom (c)	Height of Cylindrical wall (d)	Rise of Top Dom (e)	Dia. of Water Tank (f)
C-1	8 m	12 m	2 m	3 m	1.5 m	11 m
C-2	9 m	14 m	2.5 m	3.5 m	2 m	12 m
C-3	10 m	15 m	2 m	4 m	2.5 m	13 m
C-4	11 m	16 m	2.5 m	3 m	1.5 m	14 m
C-5	12 m	17 m	2 m	3.5 m	2 m	15 m

Assignment :- 2 Design of G+3 RC Building Design

1. Design a G+3 Commercial building as shown in Fig. DIET 01.

Group ID	Beam Design	Column and Foundation Design	Slab Design
C-1	Any Continues Beam	Any Corner Column	Any One Way Continues
C-2	Any Continues Beam	Any intermediate Column	Any Two Way Continues
C-3	Any Continues Beam	Any peripheral Column	Any One Way Continues
C-4	Any Continues Beam	Any Corner Column	Any Two Way Continues
C-5	Any Continues Beam	Any intermediate Column	Any One Way Continues

Assignment :- 3 Design of Retaining Wall

1. For the cantilever retaining wall of height (a) _____ m. Fix the basic dimensions of the Various elements. Angle of repose of soil is (b) _____. SBC of soil is (c) _____ and Density of soil is (d)_____ Friction coefficient between soil and concrete is (e) _____. Do the check for Stability for sliding and overturning. Design the Stem of the retaining wall.

Group ID	Height of Retaining Wall (a)	Angle of Repose (b)	SBC (C)	Density of Soil (d)	Coefficient (e)
C-1	3.5 m	35°	200 kN/m^2	18 kN/m^3	0.55
C-2	4 m	34°	210 kN/m^2	17 kN/m^3	0.50
C-3	4.5 m	35°	220 kN/m^2	16 kN/m^3	0.55
C-4	5 m	34°	230 kN/m^2	18 kN/m^3	0.50
C-5	5.5 m	33°	240 kN/m^2	19 kN/m^3	0.55

2. For the counterfort retaining wall of height (a) _____ m. Fix the basic dimensions of the Various elements. Angle of repose of soil is (b) _____. SBC of soil is (c) _____ and Density of soil is (d)_____ Friction coefficient between soil and concrete is (e) _____. Do the check for Stability for sliding and overturning. Design the Stem of the retaining wall.

Group ID	Height of Retaining Wall (a)	Angle of Repose (b)	SBC (C)	Density of Soil (d)	Coefficient (e)
C-1	3.5 m	35°	200 kN/m^2	18 kN/m^3	0.55
C-2	4 m	34°	210 kN/m^2	17 kN/m^3	0.50
C-3	4.5 m	35°	220 kN/m^2	16 kN/m^3	0.55
C-4	5 m	34°	230 kN/m^2	18 kN/m^3	0.50
C-5	5.5 m	33°	240 kN/m^2	19 kN/m^3	0.55

Assignment :- 4 Design of Flat Slab

1. Design an interior panel of flat slab. Consider drop and column head as per given data Column grid (a)_____ storey height above & Below is (b)_____ consider live load as (c)_____. Grade of concrete M20 & Fe-415 and size of column (d)_____.

Group ID	Size of Pannel (a)	Storey Height (b)	Live Load (c)	Consider	Size of Square Column (d)
C-1	5 m X 5 m	3 m	3.5 kN/m^2	Drop	450 mm
C-2	6 m X 6 m	3.5 m	4 kN/m^2	Column Head	500 mm
C-3	7 m X 7 m	4 m	4.5 kN/m^2	Drop	550 mm
C-4	5 m X 5 m	3 m	5 kN/m^2	Column Head	600 m
C-5	6 m X 6 m	3.5 m	5.5 kN/m^2	Drop	450 mm

Assignment :- 5 Design of Water Tank

1. Design a rectangular tank for the following data. Length of tank=(a)_____, width of tank=(b)_____ & Depth of water=(c)_____. The tank rests on ground.

Group ID	Length of Tank (a)	Width of Tank (b)	Depth of Water (c)
C-1	6 m	4 m	3.5 m
C-2	5 m	6 m	4 m
C-3	6.5 m	4.5 m	3 m
C-4	5.5 m	6.5 m	3.5 m
C-5	4 m	6 m	3 m

2. Design a underground circular water tank for (a) _____lacs liters capacity with flexible base. Unit weight of soil is (b) _____and angle of internal friction is $30^{o'}$. Use M30 grade of concrete.

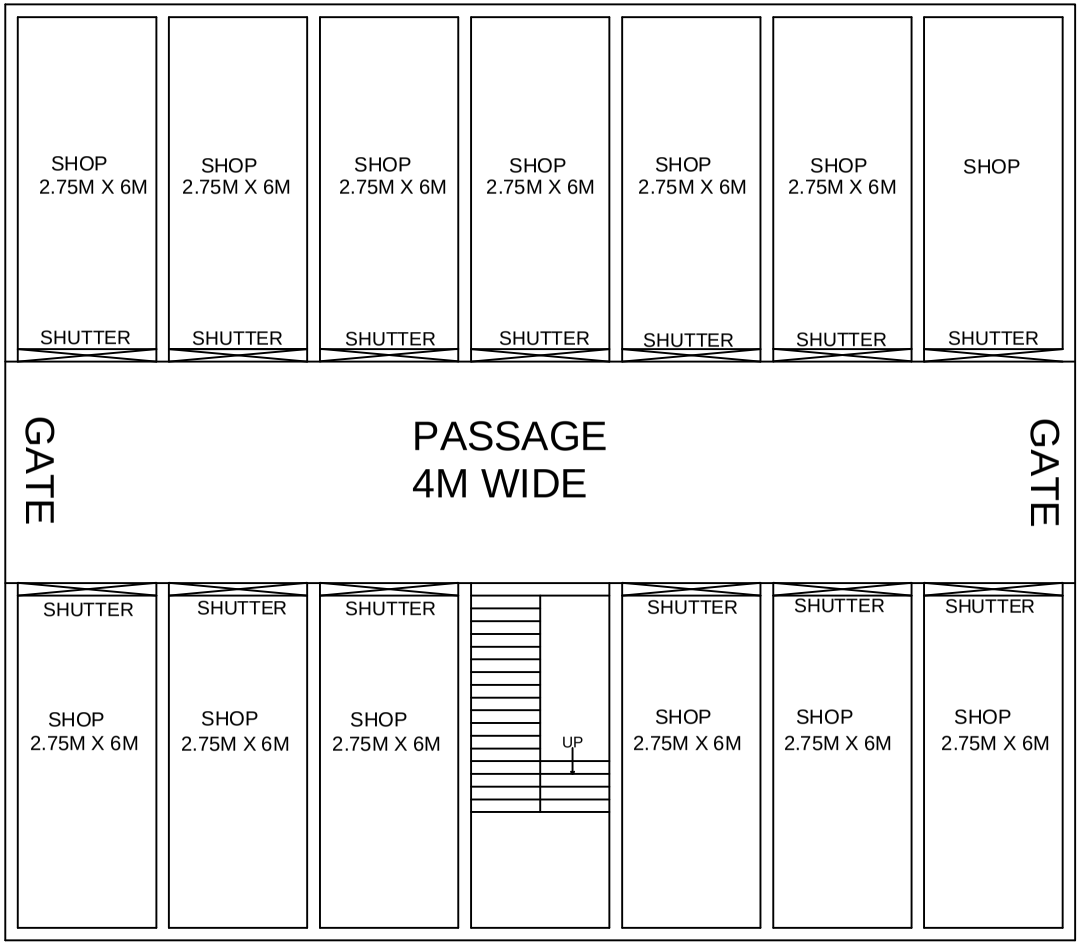
Group ID	Capacity of Water Tank (a)	Unit weight of soil (b)
C-1	3 Lakhs	16 kN/m^3
C-2	3.5 Lakhs	17 kN/m^3
C-3	4 Lakhs	18 kN/m^3
C-4	4.5 Lakhs	16 kN/m^3
C-5	5 Lakhs	17 kN/m^3

Assignment :- 6 Earthquake Resistance Design of Building

1. Calculate base shear for the three storey RC frame building (hospital) has size _____ located in _____ using seismic coefficient method for the following data:

Group ID	Size of Building (a)	No. of Column (b)	Spacing of Column (c)	No. of Story (d)	Height of Story (e)
C-1	15m X 15m	16	5 m	4	3 m
C-2	16m X 16M	25	4 m	5	3.5 m
C-3	17m X 17m	25	4.25	6	4 m
C-4	18m X 18m	16	4.5 m	4	3 m
C-5	14m X 14m	25	3.5 m	5	3.5 m

RevNo	Revision note	Date	Signature	Checked



ALL DIMENSIONS IN Meter

Ref. #	P/N			SERVICE	
Designed by	Checked by	Approved by - date	File name	Date	Scale NTS

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TITLE

DWG.NO.:DIET01	Revision 0	Sheet 1/1