**SLAB – 1**

Effective depth = 3221.6/20

=161.08 mm

Let’s Assume Over all depth = 160 mm

Effective depth (d) = overall depth-cover-diameter of rebar/2

=160-15-5

=140 mm

Effective Span=3361.6 mm

**Loading:-**

Live load = 3 KN/m2

Dead load =(0.16\*25)+3.34+0.65

=7.98 KN/m2

Total load=10.98 KN/m2

Factored Load=16.47 KN/m2

Taking 1000 mm as width Load=16.47 KN/m

**Bending moment:-**

Mx(+) = 9.86 KN-m

Mx(-) = 7.45 KN-m

My(+) = 9.5016 KN-m

My(-) = 7.076 KN-m

**Shear Force (V**) = 27.682 KN

**Check for Depth:-**

Mu = 0.133\*fck\*bd2

=78.204KN-m

Mu  > Mx and My

Hence Safe

**Area of Reinforcement in Shorter direction :-**

Mx  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 165.30 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=475.13

So provide spacing 10 mm bar @200 c/c

Ast1  provided =392.70 mm2

**Area of Reinforcement in longer direction:-**

My  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 160.07 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=490.65

So provide spacing 10 mm bar @200 c/c

Ast2  provided =392.70 mm2

**Check for Shear:-**

TOUv = V/bd

=0.197

Pt=100\*Ast1/bd

=0.2805

TOUC=0.385\*1.28

=0.4928>TOUv

Hence Safe

**Check For Deflection:-**

l/d Provided=3361.6/140

=24.011

(l/d)basic\*Kt\*kc\*Kf=20\*2\*1\*=40>l/d provided

Hence Safe

Fs=0.58\*fy\*(Ast required/Ast provided)

=118

**SLAB – 22**

Effective depth = 2.9124/20

=145.62 mm

Let’s Assume Over all depth = 160 mm

Effective depth (d) = overall depth-cover-diameter of rebar/2

=160-15-5

=140 mm

Effective Span=3052.4 mm

**Loading:-**

Live load = 3 KN/m2

Dead load =(0.16\*25)+2.41+0.65

=7.06 KN/m2

Total load=10.06 KN/m2

Factored Load=15.09 KN/m2

Taking 1000 mm as width Load=15.09 KN/m

**Bending moment:-**

Mx(+) = 4.64 KN-m

Mx(-) = 6.19 KN-m

My(+) = 3.94 KN-m

My(-) = 5.20 KN-m

**Shear Force (V**) = 23.030 KN

**Check for Depth:-**

Mu = 0.133\*fck\*bd2

=78.204 KN-m

Mu  > Mx and My

Hence Safe

**Area of Reinforcement in Shorter direction :-**

Mx  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 102.91 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=763.18

So provide spacing 10 mm bar @200 c/c

Ast1  provided =392.70 mm2

**Area of Reinforcement in longer direction:-**

My  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 105.32mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=740

So provide spacing 10 mm bar @200 c/c

Ast2  provided =392.70 mm2

**Check for Shear:-**

TOUv = V/bd

=0.164

Pt=100\*Ast1/bd

=0.2805

TOUC=0.385\*1.28

=0.4928>TOUv

Hence Safe

**Check For Deflection:-**

l/d Provided=3052.4/140

=21.80

(l/d)basic\*Kt\*kc\*Kf=20\*2\*1\*=40>l/d provided

Hence Safe

Fs=0.58\*fy\*(Ast required/Ast provided)

=118

**SLAB-4**

Effective depth = 3.2216/20

=161.08 mm

Let’s Assume Over all depth = 160 mm

Effective depth (d) = overall depth-cover-diameter of rebar/2

=160-15-5

=140 mm

Effective Span=3.3616 mm

**Loading:-**

Live load = 3 KN/m2

Dead load =(0.16\*25)+1.93+0.65

=6.58 KN/m2

Total load=9.60 KN/m2

Factored Load=14.5 KN/m2

Taking 1000 mm as width Load=14.5 KN/m

**Bending moment:-**

Mx(+) = 8.43 KN-m

Mx(-) = 11.28 KN-m

My(+) = 11.43 KN-m

My(-) = 15.35 KN-m

**Shear Force (V**) = 23.36 KN

**Check for Depth:-**

Mu = 0.133\*fck\*bd2

=78.204 KN-m

Mu  > Mx and My

Hence Safe

**Area of Reinforcement in Shorter direction :-**

Mx  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 189.54 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=413.37

So provide spacing 10 mm bar @200 c/c

Ast1  provided =392.70 mm2

**Area of Reinforcement in longer direction:-**

My  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 260 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=302.07

So provide spacing 10 mm bar @200 c/c

Ast2  provided =392.70 mm2

**Check for Shear:-**

TOUv = V/bd

=0.167

Pt=100\*Ast1/bd

=0.2805

TOUC=0.385\*1.28

=0.4928>TOUv

Hence Safe

**Check For Deflection:-**

l/d Provided=3052.4/140

=21.80

(l/d)basic\*Kt\*kc\*Kf=20\*2\*1\*=40>l/d provided

Hence Safe

Fs=0.58\*fy\*(Ast required/Ast provided)

**SLAB-2**

Effective depth = 3.5035/20

=175.18 mm

Let’s Assume Over all depth = 160 mm

Effective depth (d) = overall depth-cover-diameter of rebar/2

=160-15-5

=140 mm

Effective Span=3.6435 mm

**Loading:-**

Live load = 3 KN/m2

Dead load =(0.16\*25)+0.65

=4.65 KN/m2

Total load=7.65 KN/m2

Factored Load=11.475 KN/m2

Taking 1000 mm as width Load=11.475 KN/m

**Bending moment:-**

Mx(+) = 4.27 KN-m

Mx(-) = 5.636 KN-m

My(+) = 4.27 KN-m

My(-) = 5.636 KN-m

**Shear Force (V**) = 20.904 KN

**Check for Depth:-**

Mu = 0.133\*fck\*bd2

=78.204 KN-m

Mu  > Mx and My

Hence Safe

**Area of Reinforcement in Shorter direction :-**

Mx  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 93.60 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=839.1006

So provide spacing 10 mm bar @200 c/c

Ast1  provided =392.70 mm2

**Area of Reinforcement in longer direction:-**

My  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 93.60 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=302.07

So provide spacing 10 mm bar @200 c/c

Ast2  provided =392.70 mm2

**Check for Shear:-**

TOUv = V/bd

=0.150

Pt=100\*Ast1/bd

=0.2805

TOUC=0.385\*1.28

=0.4928>TOUv

Hence Safe

**Check For Deflection:-**

l/d Provided=3.6435/140

=26.025

(l/d)basic\*Kt\*kc\*Kf=20\*2\*1\*=40>l/d provided

Hence Safe

Fs=0.58\*fy\*(Ast required/Ast provided)

**SLAB-15**

Effective depth = 2.9124/20

=145.62 mm

Let’s Assume Over all depth = 160 mm

Effective depth (d) = overall depth-cover-diameter of rebar/2

=160-15-5

=140 mm

Effective Span=3052.4 mm

**Loading:-**

Live load = 3 KN/m2

Dead load =(0.16\*25)+0.65+3.47

=8.12 KN/m2

Total load=11.12 KN/m2

Factored Load=16.88 KN/m2

Taking 1000 mm as width Load=16.88 KN/m

**Bending moment:-**

Mx(+) = 5.66 KN-m

Mx(-) = 7.55 KN-m

My(+) = 4.403 KN-m

My(-) = 5.81 KN-m

**Shear Force (V**) = 25.76 KN

**Check for Depth:-**

Mu = 0.133\*fck\*bd2

=78.204 KN-m

Mu  > Mx and My

Hence Safe

**Area of Reinforcement in Shorter direction :-**

Mx  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 125.87 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=623.97

So provide spacing 10 mm bar @200 c/c

Ast1  provided =392.70 mm2

**Area of Reinforcement in longer direction:-**

My  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 96.52 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=813.715

So provide spacing 10 mm bar @200 c/c

Ast2  provided =392.70 mm2

**Check for Shear:-**

TOUv = V/bd

=0.184

Pt=100\*Ast1/bd

=0.2805

TOUC=0.385\*1.28

=0.4928>TOUv

Hence Safe

**Check For Deflection:-**

l/d Provided=3052.4/140

=21.80

(l/d)basic\*Kt\*kc\*Kf=20\*2\*1\*=40>l/d provided

Hence Safe

Fs=0.58\*fy\*(Ast required/Ast provided)

**SLAB-5**

Effective depth = 1.2606/20

=63.03 mm

Let’s Assume Over all depth = 120 mm

Effective depth (d) = overall depth-cover-diameter of rebar/2

=120-15-5

=100 mm

Effective Span=1360.6 mm

**Loading:-**

Live load = 3 KN/m2

Dead load =(0.12\*25)+0.65+1.283

=4.94 KN/m2

Total load=7.94 KN/m2

Factored Load=11.91 KN/m2

Taking 1000 mm as width Load=11.91 KN/m

**Bending moment:-**

M =2.37 KN-m

**Shear Force (V**) = 7.50 KN

**Check for Depth:-**

Mu = 0.133\*fck\*bd2

=39.9 KN-m

Mu  > M

Hence Safe

**Area of Reinforcement in Shorter direction :-**

M =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 54.84 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=1432.16

So provide spacing 10 mm bar @200 c/c

Ast1  provided =392.70 mm2

**Area of Reinforcement in longer direction:-**

Ast = 0.12%\*b\*d

=120 mm2

Provide 10 mm bar@200c/c

**Check for Shear:-**

TOUv = V/bd

=0.075

Pt=100\*Ast1/bd

=0.2805

TOUC=0.385\*1.28

=0.4928>TOUv

Hence Safe

**Check For Deflection:-**

l/d Provided=1260.6/100

=12.606

(l/d)basic\*Kt\*kc\*Kf=20\*2\*1\*=40>l/d provided

Hence Safe

Fs=0.58\*fy\*(Ast required/Ast provided)

**SLAB-21**

Effective depth = 2646.86/20

=132.343 mm

Let’s Assume Over all depth = 130 mm

Effective depth (d) = overall depth-cover-diameter of rebar/2

=130-15-5

=110 mm

Effective Span=1360.6 mm

**Loading:-**

Live load = 3 KN/m2

Dead load =(0.13\*25)+0.65+1.2

=5.1 KN/m2

Total load=8.1 KN/m2

Factored Load=12.15 KN/m2

Taking 1000 mm as width Load=12.15 KN/m

**Bending moment:-**

M =10.63 KN-m

**Shear Force (V**) = 16.07 KN

**Check for Depth:-**

Mu = 0.133\*fck\*bd2

=48.28 KN-m

Mu  > M

Hence Safe

**Area of Reinforcement in Shorter direction :-**

M =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast =230.180 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=341.21

So provide spacing 10 mm bar @200 c/c

Ast1  provided =392.70 mm2

**Area of Reinforcement in longer direction:-**

Ast = 0.12%\*b\*d

=132 mm2

Provide 10 mm bar@200c/c

**Check for Shear:-**

TOUv = V/bd

=0.146

Pt=100\*Ast1/bd

=0.2805

TOUC=0.385\*1.28

=0.4928>TOUv

Hence Safe

**Check For Deflection:-**

l/d Provided=2646.86/110

=24.06

(l/d)basic\*Kt\*kc\*Kf=20\*2\*1\*=40>l/d provided

Hence Safe

Fs=0.58\*fy\*(Ast required/Ast provided)

**SLAB-1(roof)**

Effective depth = 3.2216/20

=161.08 mm

Let’s Assume Over all depth = 160 mm

Effective depth (d) = overall depth-cover-diameter of rebar/2

=160-15-5

=140 mm

Effective Span=3521.6 mm

**Loading:-**

Live load = 2 KN/m2

Dead load =(0.16\*25)+0.65

=4.65 KN/m2

Total load=6.65 KN/m2

Factored Load=9.975 KN/m2

Taking 1000 mm as width Load=9.975 KN/m

**Bending moment:-**

Mx(+) =4.95 KN-m

Mx(-) = 6.56 KN-m

My(+) = 4.33 KN-m

My(-) = 5.81 KN-m

**Shear Force (V**) = 17.56 KN

**Check for Depth:-**

Mu = 0.133\*fck\*bd2

=78.204 KN-m

Mu  > Mx and My

Hence Safe

**Area of Reinforcement in Shorter direction :-**

Mx  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 109.15 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=719.55

So provide spacing 10 mm bar @200 c/c

Ast1  provided =392.70 mm2

**Area of Reinforcement in longer direction:-**

My  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 95.45 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=822.83

So provide spacing 10 mm bar @200 c/c

Ast2  provided =392.70 mm2

**Check for Shear:-**

TOUv = V/bd

=0.104

Pt=100\*Ast1/bd

=0.2805

TOUC=0.385\*1.28

=0.4928>TOUv

Hence Safe

**Check For Deflection:-**

l/d Provided=3521.6/140

=25.15

(l/d)basic\*Kt\*kc\*Kf=20\*2\*1\*=40>l/d provided

Hence Safe

Fs=0.58\*fy\*(Ast required/Ast provided)

**SLAB-10(roof)**

Effective depth = 2.9124/20

=145.62 mm

Let’s Assume Over all depth = 140 mm

Effective depth (d) = overall depth-cover-diameter of rebar/2

=140-15-5

=120 mm

Effective Span=3212.4 mm

**Loading:-**

Live load = 2 KN/m2

Dead load =(0.16\*25)+0.65

=4.65 KN/m2

Total load=6.65 KN/m2

Factored Load=9.975 KN/m2

Taking 1000 mm as width Load=9.975 KN/m

**Bending moment:-**

Mx(+) =5.25 KN-m

Mx(-) = 6.90 KN-m

My(+) = 2.88 KN-m

My(-) = 3.808 KN-m

**Shear Force (V**) = 14.52 KN

**Check for Depth:-**

Mu = 0.133\*fck\*bd2

=78.204 KN-m

Mu  > Mx and My

Hence Safe

**Area of Reinforcement in Shorter direction :-**

Mx  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast =134.70 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=583.07

So provide spacing 10 mm bar @200 c/c

Ast1  provided =392.70 mm2

**Area of Reinforcement in longer direction:-**

My  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 75.50 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=1040.26

So provide spacing 10 mm bar @200 c/c

Ast2  provided =392.70 mm2

**Check for Shear:-**

TOUv = V/bd

=0.121

Pt=100\*Ast1/bd

=0.2805

TOUC=0.385\*1.28

=0.4928>TOUv

Hence Safe

**Check For Deflection:-**

l/d Provided=3212.4/140

=22.94

(l/d)basic\*Kt\*kc\*Kf=20\*2\*1\*=40>l/d provided

Hence Safe

Fs=0.58\*fy\*(Ast required/Ast provided)

**SLAB-4 (roof)**

Effective depth = 3.2216 /20

=161.08 mm

Let’s Assume Over all depth = 160 mm

Effective depth (d) = overall depth-cover-diameter of rebar/2

=160-15-5

=140 mm

Effective Span=3521.6 mm

**Loading:-**

Live load = 2 KN/m2

Dead load =(0.16\*25)+0.65

=4.65 KN/m2

Total load=6.65 KN/m2

Factored Load=9.975 KN/m2

Taking 1000 mm as width Load=9.975 KN/m

**Bending moment:-**

Mx(+) =6.93 KN-m

Mx(-) = 9.28 KN-m

My(+) = 4.33 KN-m

My(-) = 5.814 KN-m

**Shear Force (V**) = 17.56 KN

**Check for Depth:-**

Mu = 0.133\*fck\*bd2

=78.204 KN-m

Mu  > Mx and My

Hence Safe

**Area of Reinforcement in Shorter direction :-**

Mx  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 155.25 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=505.60

So provide spacing 10 mm bar @200 c/c

Ast1  provided =392.70 mm2

**Area of Reinforcement in longer direction:-**

My  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 96.57 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=813.30

So provide spacing 10 mm bar @200 c/c

Ast2  provided =392.70 mm2

**Check for Shear:-**

TOUv = V/bd

=0.125

Pt=100\*Ast1/bd

=0.2805

TOUC=0.385\*1.28

=0.4928>TOUv

Hence Safe

**Check For Deflection:-**

l/d Provided=3521.6/140

=25.15

(l/d)basic\*Kt\*kc\*Kf=20\*2\*1\*=40>l/d provided

Hence Safe

Fs=0.58\*fy\*(Ast required/Ast provided)

**SLAB-13 (roof)**

Effective depth = 3.5035 /20

=175.18 mm

Let’s Assume Over all depth = 160 mm

Effective depth (d) = overall depth-cover-diameter of rebar/2

=160-15-5

=140 mm

Effective Span=3803.5 mm

**Loading:-**

Live load = 2 KN/m2

Dead load =(0.16\*25)+0.65

=4.65 KN/m2

Total load=6.65 KN/m2

Factored Load=9.975 KN/m2

Taking 1000 mm as width Load=9.975 KN/m

**Bending moment:-**

Mx(+) =5.772 KN-m

Mx(-) = 7.648 KN-m

My(+) = 5.05 KN-m

My(-) =6.78 KN-m

**Shear Force (V**) = 18.97 KN

**Check for Depth:-**

Mu = 0.133\*fck\*bd2

=78.204 KN-m

Mu  > Mx and My

Hence Safe

**Area of Reinforcement in Shorter direction :-**

Mx  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 127.51 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=615.95

So provide spacing 10 mm bar @200 c/c

Ast1  provided =392.70 mm2

**Area of Reinforcement in longer direction:-**

My  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 112.85 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=695.97

So provide spacing 10 mm bar @200 c/c

Ast2  provided =392.70 mm2

**Check for Shear:-**

TOUv = V/bd

=0.125

Pt=100\*Ast1/bd

=0.2805

TOUC=0.385\*1.28

=0.4928>TOUv

Hence Safe

**Check For Deflection:-**

l/d Provided=3803.5/140

=27.16

(l/d)basic\*Kt\*kc\*Kf=20\*2\*1\*=40>l/d provided

Hence Safe

Fs=0.58\*fy\*(Ast required/Ast provided)

**SLAB-15 (roof)**

Effective depth = 2.9124/20

=145.62 mm

Let’s Assume Over all depth = 140 mm

Effective depth (d) = overall depth-cover-diameter of rebar/2

=140-15-5

=120 mm

Effective Span=3212.4 mm

**Loading:-**

Live load = 2 KN/m2

Dead load =(0.14\*25)+0.65

=4.65 KN/m2

Total load=6.65 KN/m2

Factored Load=9.975 KN/m2

Taking 1000 mm as width Load=9.975 KN/m

**Bending moment:-**

Mx(+) =4.53 KN-m

Mx(-) = 5.87 KN-m

My(+) = 2.88 KN-m

My(-) =3.808 KN-m

**Shear Force (V**) = 16.021 KN

**Check for Depth:-**

Mu = 0.133\*fck\*bd2

=78.204 KN-m

Mu  > Mx and My

Hence Safe

**Area of Reinforcement in Shorter direction :-**

Mx  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 114.26 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=687.37

So provide spacing 10 mm bar @200 c/c

Ast1  provided =392.70 mm2

**Area of Reinforcement in longer direction:-**

My  =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 73.60 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=1067.11

So provide spacing 10 mm bar @200 c/c

Ast2  provided =392.70 mm2

**Check for Shear:-**

TOUv = V/bd

=0.133

Pt=100\*Ast1/bd

=0.2805

TOUC=0.385\*1.28

=0.4928>TOUv

Hence Safe

**Check For Deflection:-**

l/d Provided=3212.4/120

=26.77

(l/d)basic\*Kt\*kc\*Kf=20\*2\*1\*=40>l/d provided

Hence Safe

Fs=0.58\*fy\*(Ast required/Ast provided)

**SLAB-5**

Effective depth = 1.2606/20

=63.03 mm

Let’s Assume Over all depth = 120 mm

Effective depth (d) = overall depth-cover-diameter of rebar/2

=120-15-5

=100 mm

Effective Span=1360.6 mm

**Loading:-**

Live load = =2 KN/m2

Dead load =(0.12\*25)+0.65

=3.65 KN/m2

Total load=5.65 KN/m2

Factored Load=8.475 KN/m2

Taking 1000 mm as width Load=8.475 KN/m

**Bending moment:-**

M =1.961 KN-m

**Shear Force (V**) = 5.765 KN

**Check for Depth:-**

Mu = 0.133\*fck\*bd2

=39.9 KN-m

Mu  > M

Hence Safe

**Area of Reinforcement in Shorter direction :-**

M =0.87\*fy\*Ast\*d\*[1-(fy\*Ast/fckbd)]

Ast = 45.45 mm2

Spacing = (1000\*3.1416/4\*102)/Ast

=1432.16

So provide spacing 10 mm bar @200 c/c

Ast1  provided =392.70 mm2

**Area of Reinforcement in longer direction:-**

Ast = 0.12%\*b\*d

=120 mm2

Provide 10 mm bar@200c/c

**Check for Shear:-**

TOUv = V/bd

=0.0576

Pt=100\*Ast1/bd

=0.2805

TOUC=0.385\*1.28

=0.4928>TOUv

Hence Safe

**Check For Deflection:-**

l/d Provided=1260.6/100

=12.606

(l/d)basic\*Kt\*kc\*Kf=20\*2\*1\*=40>l/d provided

Hence Safe

Fs=0.58\*fy\*(Ast required/Ast provided)

**\*\*\*\*\*\*MUMPTY ROOM SLAB SAME AS SLAB 5**

**\*\*\*STAIR CASE SLAB:-**

Provide Over all depth 200 mm

Area of main Reinforcement 1615 mm2 Provide 12 mm bar 70 mm c/c

Area of Distribution bar 392.70 mm2 Provide 10 mm bar 200 mm c/c