LECTURE NOTE

ON

ESTIMATION AND COST EVALUATION-I (TH.4)

3RD SEMESTER IN CIVIL ENGG.



PREPARED BY

Er. PRIYABRATA TRIPATHY

(LECTURER)

DEPARTMENT OF CIVIL ENGG.

G.I.E.T (POLYTECHNIC),JAGATPUR,CUTTACK,ODISHA

ESTIMATION & COST EVALUATION-(I Estemate Definition The estimate is the probable cost of a work (building Project) à ces carry prepared before the Construction > Estémate à prepare by Casculating the quantities required and then calculating the cost at Suitab rate. The preimary Object of an estimate is to know the Cost of the Construction work before Construction Appes Of Estimate make me months and make the Preelemenany/Rough cost/Approximate Esternate. 2 Plenth Area Esternate. 34 Cabe rate Estémate. 4 Defailed Estimate. 5 Revised Estimate 5/ Annuai Repair / Annuai maintenance Estémate. # Supplementary Estémate 81 Oceantety Estémate Il Prielemenary / Rough Cost / cappronimate Estimate This is an Estimate to foundout and approximate Cost & short time. This type of Estimate à prepared to beside the financial aspect and policy matter,

Griving an idea of the cost by proposar affertaking

ento. Consideration the requirements of the depart-

ment concerened.

> The rough Cost Estémate is accompanied by is A detailed report Drug Specification is site plan / layout plan showing the proposar of / hand by promoting planty in a Ey line plant showing the North line On it. In The brief idea of nates for different items. Peinth Area Estimate The Estimate à an appronamate twitch consest of cooking out the plenth area of a building which is muniplied by plints area rate to gate an Estimate For that building. > The pearth area should be carculated for the roofed area of a-building by taking enternal déamentions exceeding the plinth Obsaids, The accelot Countyard. 3 Cube Arrea Estimate This estimate is also known as appronimate Estimate & & pased ou corperor of buobosed paylond to be constructed and then applying to it the rate per cubic metre (prints Area or the building xheight) Capic Content rate) Detailed Estimate This Estimate Consist Of the detailed particulars for the quartities, nate and Cost of are items

Envoubled for Satisfance.

Detailed Estimate à accompany phit is most plisse al Detail Report b Detail Specification d'Detait Drawings (Plan, elevation, section) de Carcalason and design various chems like beams & coldinary & slower ett el scheduce of rate double 11. pristano 16 Fl Analysis of rate 5) Revised Estimate It is also a derailed estimate and & preparted aftest, when the original Sanctioned detailed lessemate enceed by 5%. On more, either due to the mater being found in on due to some Monaal Repair / Innua Motherance Estimate To keep the building On any Construction work En proper Condition annual repaires are Carriedous For which and estimate à prepared. tor buildings is include whitewashing, pauling. Colocie es assing, et a. Ceretain petty works, like repair of fonce, parch repair to cement plaster. Of walk replacement of glass panes etc The idential repair amount should not be more, than I'm of the capital cost of he was mil

Supplementary Astronate Mohen Sum additions are done to the

More agress detailed estimate is prepared to Supplement the Orciginal work. This estimate &

Stand 13 Surpading Je

known as supplementary Estimate.

8) Quartity Estimate

This is a Comprete estimate of quartities for au ctems of work requained to complete a project. the quantity of individual items of different work is Carculated from the respective dimensions on the drawing. Then: Cost of is individual item, is Obtained by multiplying the quantity with the

Definition plintentente many may 2000 1000

The builtered up covered curea of a building measured at Floor level of any stoney is Cauled Prenth area. It is carculated for the moofed area Of a building by taking enternal dimensions excluding the plenth Offset. The area of Countyer Open area, barconies and Cantilever projections, etc showed protibe included in ci.

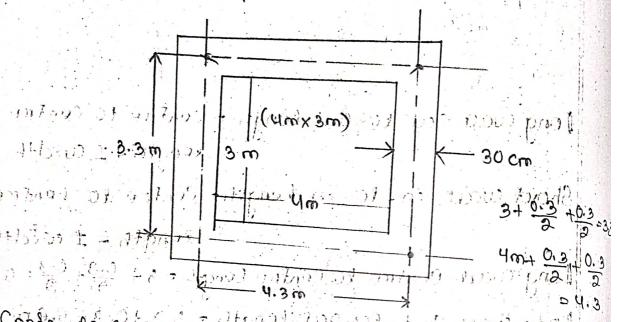
Floor Area

Fotas area of feodre En between wases their is area of fevor of are nooms, venandahis, connictors, passages entrance haves, étalirens mona

Stones, bath and latrition et is Carred frook and Froom are is equal to plant area minus area Occuped by wall which should include the Area of door and other Opening; intermediate Pillars and Supports 501/1. Area of the bacchies Shall be Consider in the froom Carpet Area Ot is the liveable area of a building at angle Frooms. It is total froom area minus the circulatio area and other cerusive buch as bathrooms; water Crothes, air conditining mooms, etc. It should exclude the kitchen, factrie; stones and Similar other moons which are not weed for Living purpose in residensial building. UNITS OF MEASUREMENT I Earthwork encavation I Cement concrete (PCC) Cum. I Cement Concrete (PCC) Where work Plastering, painting Sigm. METHOD OF ESTIMATION I Centerline method		
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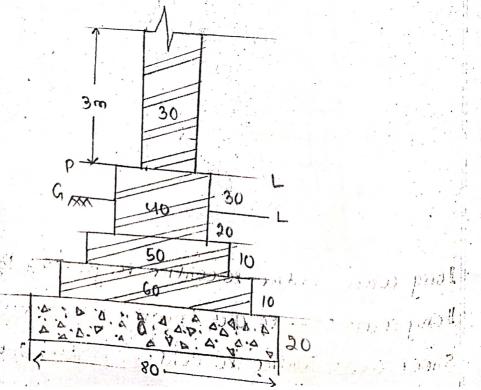
Center line Method

In this Method total Center Line length of wall in building às Cauculated and the value & multiplied with breath and depth of the nespective items to get the total quantity of the item.

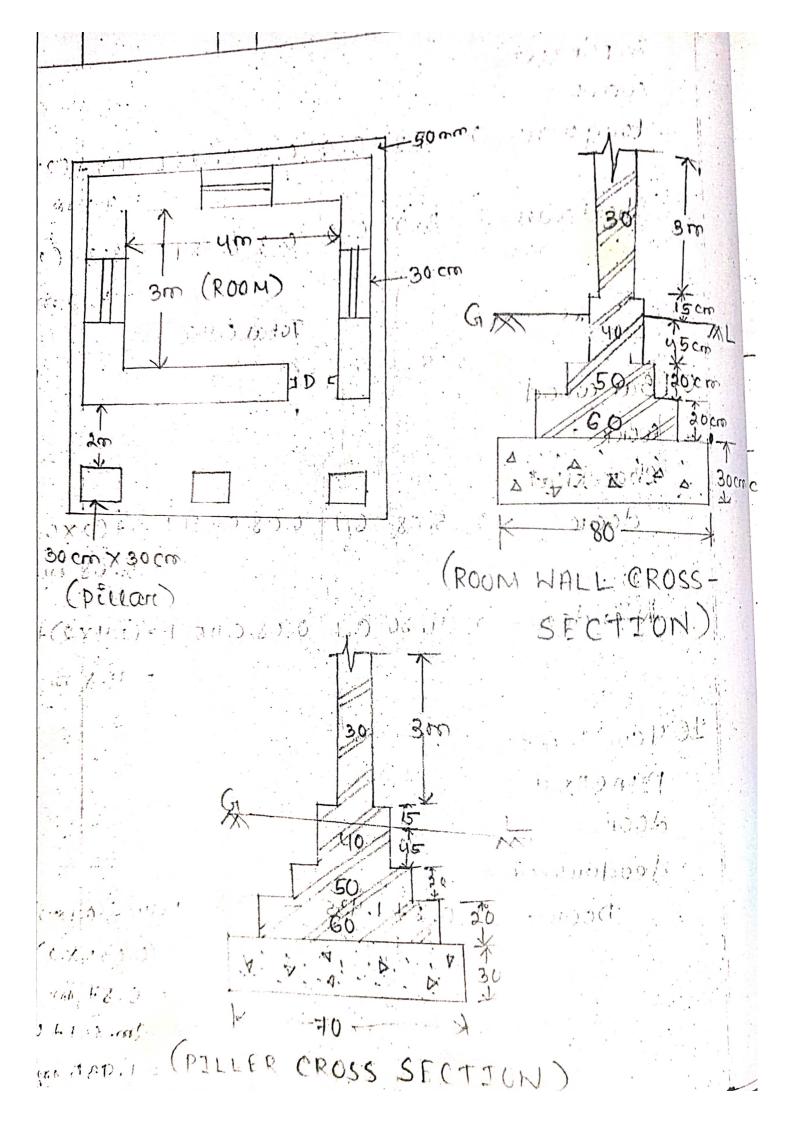


Center to center length of long wall = connect length of woom tous might of man

Center to Center length of short wall = inner breath of 1000m + one width of wall



	Total Centre legit religion 2 (4,3) x2+ (3,3) x2+ (3,3) x2.										
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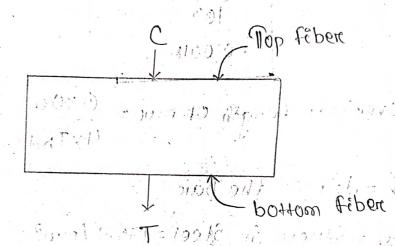
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	and footing	2	2.8	0.5	0.2	0.560 L= 3,370,62
13 - 7	planth	2	2.9	0.4	0.6	1.392 L= 3.3-0.4.2
	Verandah Pillan)		
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	and footing	3		0.5	0.2	
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			,			(-)1.95	in the large state of
						20.186	

RCC Work (Reen Forced Comens Concrete) (3)

PCC:- Peain Cement Concrete (Cement + Sand + Course aggrégate)

Pêllar and Column = Vertêcal member Beam = Horeizontal member

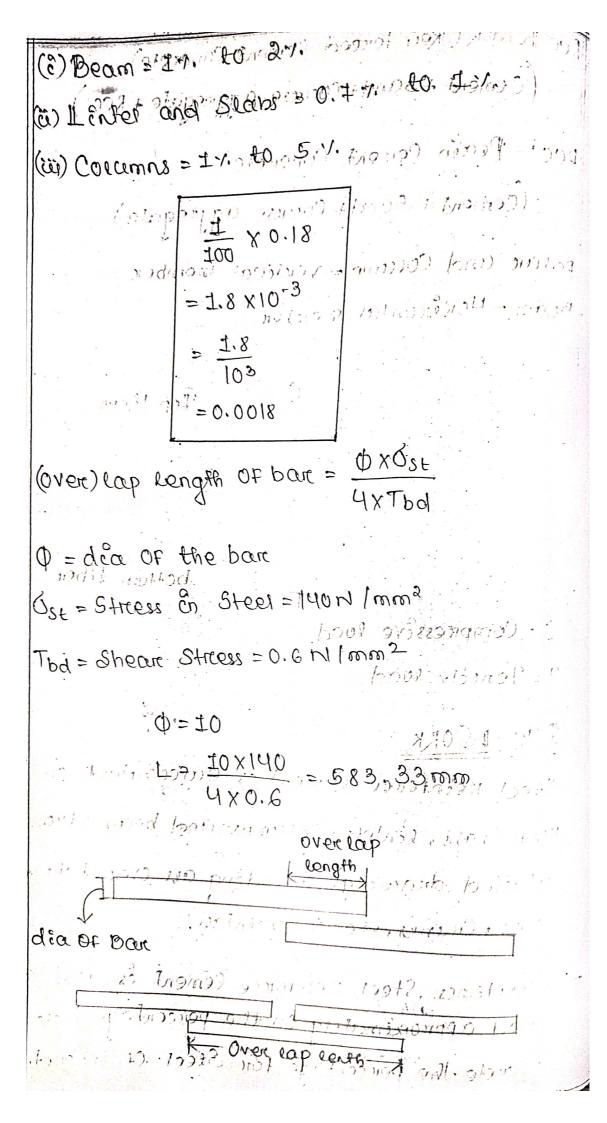


C = Compressère load

T= Tensile wad

RCC Work
Steel réénfonce Cement & Carcalated en Rcc
moof Stabs, lêntels, columns and beam from the
detailed drawings including all over labs,
hooks, Cranks, etc in quintals.

Sometimes Steel réinfonce Cement às also calculated approximately on the percentage basic of Concrete the percentage for Steel Or Concrete.



This percionalian standard specification the lap lap length in Reinforcement shall not be less than.

(I) For lension bour = Bardia x Actuar tensile Stress
Four limes the permissible

average bond Stress

Ore
30 times the bore diameter
which ever is greater

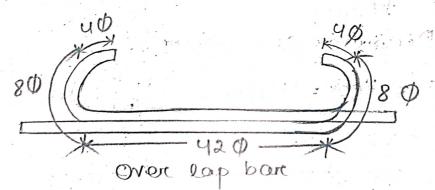
(2) For Compression box =

Dan déameter X Actual Compressive Stress

Fire times the permissible average bond Stress

Ore

24 times the box diameter which event is greter



Over lap length= 42+8+4=540 (Semicincular)

