BHARTIYA INSTITUTE OF ENGINEERING & TECHNOLOGY SIKAR

DEPARTMENT OF CIVIL ENGINEERING



LAB MANUAL

6CE4-23: OUANTITY SURVEYING & VALUATION

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BHARTIYA INSTITUTE OF ENGINEERING & TECHNOLOGY SIKAR

DEPARTMENT OF CIVIL ENGINEERING

LAB MANUAL – QUANTITY SURVEYING AND VALUATION (6CE4-23)

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	Types of estimate:
ip	Rough cost estimate / preliminary estimate / approx estimate / Abstract-esti,
ij	Plinth area estimate.
	cube note estimate.
	Approximate quantity method estimate.
	detailed estimate / 9tem mote estimate.
	Revised estimate
	Supplementary estimate
	Supplementary and seevised enimate.
_	Annual repair or maintance estimate.
	the resemble the second of the second of the second
	Pueliminary Estimate:
	It is sequired for preliminary studies of various aspect of a work , to
	decide the financial position or policy for administrative sanction by
	the competant administrative authority.
	Presiminary estimate may be prepared by various ways for different
	otructures and works.
	eg: buildings, reads and highways, isuigntion channels, bridge
-	and univers, sewarage project and water supply project.
	(restab
2/0	Plinth Area Estimate:
	This is prepared on the basis of plinth area of building, the state
	being deducted from the cost of similar building having similar
	specification, height and construction in the locality.
	Plinth area is colewated by Hinding the plinth area of the building
	and multiplying by the plinth area state. The plinth area should be
	calculated for the covered area by taking external dimension of the
	building at the Hoor level. countyard and other open area should
	not be included in the plinth area. Plinth area estimate is only
	approximate, an is preliminary estimate to know the approximate
	ate cost before hand.
1	
	eg: The approximate cost of a building having the plinth area of

	100m2. Rs 900/m2 workout as 90,000.
	The state of the s
طربي	Cube Rate Estimate:
	gris a preliminary estimate or an approximate estimate, and is
	prepared on the basis of the cubical contents of the buildings the
	cube state being deducted from the cost of the similar building having
MILLERY Y	similar specification and construction, in the locality.
	The approximate cost of a building of whic content (volume) of
Asterial.	400m3 at the state supers (Rs) 180/m3 tomes to Rs. 72,000.
N . 1 1 4	I is the formation of war desired to the formation of the second
	Note: Cube state estimate is more accurate as compais to plinth
	areo estimate as the height of the building is also compaired.
4,6	Approximate quantity method Estimate:
	In this method approximate total length of the wall is found
	sunning metre and this total length multiply by the rate per
27 10	sunning metre of wall gives a fairly cost.
Name of the	
.,	For this method the structure may be devided into two parts;
170	foundation including plinth.
iiþ	Super structure.
	The sunning meter cost for foundation and super structure should be
	·
	calculated first and this running metre rate should be multiply
	by the total length of walls.
W Hand	and the state of the section of the description of the section of
5/0	Detailed Estimate:
	It is an accurate estimate and consist of working out the quant-
	tities of each items of work, and working the cost.
	The dimension, length, breadth and height of each item are taken
	out correctly prom drawing and quantities of each items are
	colculated, and abstracting and billing are done.
	The detail estimate is prepared in two stages;

	Cla	SSMAte	
0	Date _ Page _		0

	details of measurement and calculation of quantities.
	Abstract of estimated cast.
	The detailed estimate is a companied with;
jb	Report and manifestate and showing your miles of the
ii	Creneral specifications
iii	detail specifications.
ivb	Decawings : Plan, elevation, sectional elevation, detailed drawing
د ا ود	site plan or lay out plan or Index plan, etc.
1/b	calculation and design : design of toundation, beam, slab, lintel,
	design of channel in cose of invigation channel, design of thickness
pine	of metal coust in rose of scood, etc.
div	Analysis of states.
6b_	Revised Estimate: margines boots of million of margine and
	Revised extimate is detailed extimate and is required to be
	prepared under any one of the following circumstances.
	when the original sanction estimate is excided by more than 5%.
->-	when the expenditure on a work exceeds by the amount of more
	than 10 %.
→	when their are morerial deviation from the original proposal.
7,6	Supplementary Estimate:
Himor	Supplementary estimate in the last
	Supplementary estimate is detailed estimate and is prepared
	when additional works are required to supplement the
	original works, or when questier development is esequired during
	the progress of work.
	the state of the same to be a state of the same of the
86	Supplementary and Revised Estimate:
	when a work is partially abordened and the estimate cost of the
B-71 11	siemaining work is less than 95% of the original work, that is
- 11	
	less than 98% of the original panction estimate. A supplementary

Annual Repair and maintanance estimate :
Annual sepair or maintanance estimate is detailed estimate and is prepared to maintain the structure and safe condition.

For buildings this include white washing, colour washing, painting minor sepairs, etc.

*	General idea in percentage for priliminary estimate for building
	ework :-
طار	Cost of labour and material
ib	Cost on account of labour -> 30 to 35% of whole cost
طرزز	Cost on account of materials - 70 to 65% of whole cost.
2,10	Direct Cost and Overhead Cost
ماز	Direct cost on actual work -> 85% of whole cost
411	Overhead cost due to establishment, supervision, incidentes, et
	-> 15% of the whole work.
,	
طرة طرد	Cost of joundation and pilath -> 10 to 15% of whole cost.
الأنا	Cost of joundation and pilath -> 10 to 15% of whole cost. Cost of superstructure -> 90 to 85% of whole cost.
اله مرب	Cost of second storey -> 85 % to 95% of the first storey.
,	The state of the s
طريح	cost of different parts or 7. breakup of building (excluding soniter
	and electrical works).
طرژ	Earthwork in excountion & filling -> 1/2 % of whole work cont
ii}	Conviete in foundation -> 5% of the whole works cost.
طرأأأ	Damp prost cowese -> 1% "
inp	Brick work -> 34 % "
Np.	Roofing -> 20% "
rip	Hooning -> 6% "
viis	poors and windows -> 16 %- "
11	Plastering and pointing -> 10% "
irp	white washing, colour washing, paint, etc -> 2% "
x,	miscellaneous - 51/2 % of the whole work cost
	Total = 100% of the whole cost.

	Page
6,6	Cost of don'tory and electrical works :
طرز	TUPPHU COLLAND
11/2	egection egection
	fan > 8% of the building cost.
ماده	
المعالم	Priepare a preliminary estimate of a building project with a total
•,	I would still I willed that
iß	20 per 39,111.
طرزز	of the building cost
iiip	Exetra for water supply and sanetary installation - 5% of the Building
	cost.
JVþ	Extra for internal installation - 14% of the building cost
V/b	Conting encles - 3%. of the building cost.
div	Conting encles - 3%.
viip	
	Superivision charges - 8%.
ve- 11	pulled and a state of the state
213- is	Building cost - 1500 sqm @ 950 Rs per sqm
	= 1500 x 950 = Rs 1425000.00
101	with the first time to the state of the stat
طراآ	special authitect treatment = 1425000 x 1-5 = Rs 21375.00
	if the bearing sector is a first to again
	if course for special assaulte Bioconser 300 2 of published
iii'y	water supply and sometry installation = 1425000 x 5
	in the partie of a country of parties of a continue of
Name and Address of the Owner, where	= R8 71850:00
-	the British for the property in the section of
jvj	Internal electrical installation = 1425000 x 14 = 199500.00
/	100
V	0ther annuface 1425000 X 6 = Rs 85500.00
-	Other services = 1425000 x 6 = KB 83300.00
The state of the s	The state of the s
The same of the sa	0 1 2 200 9 C 200
	Total = Rs 1802625.00

Contingencies	-> 3% of over all	
V	•	- 54078·75
	100	

Supervison charge $\Rightarrow 8\%$ of overall = $1802625 \times 8 = 144210.66$

Total estimated Cost = 1802625 + 54078.75 + 144210.00= 2000913.75/

Plinth Areo estimate:

Quest Prepare o preliminary estimate of a four storeyed office building howing carper ones of 2000 sq.m. for obtaining the administrative approval of the govt given the following date it may be assumed that 30% of the buildup will be taken up by the corridors, verendants, stair one, ere and 10% of the build up area will be occupied by walls.

ip Plinth area rate is = Rs 950.00 sq.m.

extra for special anchitect treatment = 0.5% of building (ast Extra due to deep foundation at site = 1% of building cast

Extra for water supply & sanitary installation = 6% of the

building cost

vip Extra for electric installation = 12.5% of the building cost.

1) Contingencies = 0.5%.

villy supervision = 8%

occupied by the wall

	classmate	R
	Date	
5	Page	

let & be the build up area or plints area.

then, x = 2000 sg·m + 30. x + 100

= 2000 + 3x + x 10 10

10x - 4x = 2000

x = 3333 /3 sqim.

Building Cost = 3333 1/3 59. m @ RS 950.00 sq. m = 3333 1/3 × 950

= RS 3166683.50

Extra for deep foundation = at 1. building cost

= 3166663.50 X /

= 31666.65

special Asthitectural treatment = 0.5% of building Cost

= 3166663.50 × 0.5

15833.32

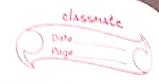
water supply and Sanitation intollation = 6% of building cost

3166663.50 X 6

= 189999.81

= 12.5% of building cost Elcetric installation

= 3166663.50 X



cother services = 5% of building cost-= 3188863+50 X S.

= 158333:17

Total > 3166663.50 + 31666.65 + 15835.28 + 189999.81 + 395838.93 + 158333.17

⇒ Rs 39583988-22,

Contingencies = 21/2 of overall = 3958328.22 x 20-5

= 98958.22

supervision charges = 8% of overall = 3958388.58 × 8 100

111

= 316666.30

Grand Total = 3958388.22 + 98258.22 + 316666.30

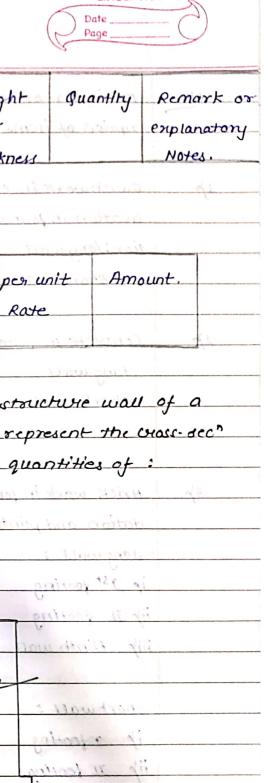
Priepare a rough cost estimate for the Civil work required for a school requiring a total compet anea of 5000 sqm this include the actual ploor area required for class recoms, labs, offices and stores, etc. suitable extra provision should be made for walls verandas, Corridors, lauatories, stair case etc. the plinth area rates at RI 1500 person for that area suitable extraprovision may be made for special architectural feature water supply and sonitary connection, for internal Power and electrical connections and for the other sorvices.

cubical content method : PHEPONE the Hough estimate for a proposed commercial complex. for a municipal corportion for the following data. plinth area = 500 sq.m / floor Height of each storey = 3.5 m No. of storey = 61+2 cubical content rate = Rs 1000 /m3. Provide for a following as a percentage of structured Cost as water supply sanitory averangement = 8% cost of building. electrification = 6% of the building Cost of puctuation of mates = 5% of the building cost of Contractor profit = 10%. ex Petty supervision & Contingencies = 3%. Wir Cubical Content = No. of storey (plints Area) x height of each storey $= 3 (500 \times 3.5) = 5250 m^3$ structural cost or building Cost = 5250 x 1000 5250000 Rs. other provision: water supply and sanitation = 5250000 x 3 => 420000 b) Electrification = 5250000 X 6 Eluctuation of nates = 5250000 X 5 262500

Scanned with CamScanner

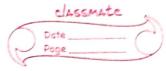
	Date Page
	Standard Cont total = 997500 + 5450000 = 6947500
-41	$a_{x,y} = c_{y,y} = c_{y,y} = c_{y,y}$
ap	$P/s \ L \ contigencies = 6247500 \times 3$
	= 187400
eþ	Gentra Her Profit = 6247500 x 10
	= 634750
11	TOTAL COST = 6947500 + 187400 + 629750
	= 7059600 Ps.

. harde 7.	whitabilly majores are particular to designate the in the minus
*	methods of taking out Quantities:
i)b	Long wall - short wall method.
	Centre line method.
1	The Expensed & Plant & Manaphan & Manaphan.
ib	Long wall - short- wall method:
	In this method the wall along the length of the soom is considered
	to be long wall while the wall perpendicular to the long wall is
	said to be short wall. to get the length of long wall or whork wall
	Conculate first the centre line, length of individual walls.
iono di	Then the length of long wall (out to out) may be calculated after
	adding half breadth at each end to its centre I'me length.
	The length of short wall measured in to in many be length.
	The length of short wall measured in to in may be found by deducting half breadth from its centre length at each end.
1	() () () () () () () () () ()
مرزن	descended and some months di
<i>ii)</i>	Centre line method:
iiþ	Centre line method: This method is suitable for walls of similar cross-section have
11)	Centre line method: This method is suitable for walls of similar cross-section have the total centre line length is multiplied by breadth and debth of
1i)o	Centre line method: This method is suitable for walls of similar cross-section have the total centre line length is multiplied by breadth and depth of sespective items of to get the total quantity at a time when cross
iiþ	Centre line method: This method is suitable for walls of similar cross-section have the total centre line length is multiplied by breadth and depth of respective items of to get the total quantity at a time when cross wall or portion wall join with main wall the centre line length
	Centre line method: This method is suitable for walls of similar cross-section have the total centre line length is multiplied by breadth and depth of respective items of to get the total quantity at a time when cross wall or portion wall join with main wall the centre line length gets reduced by half of breadth for each junction.
	Centre line method: This method is suitable for walls of similar cross-section have the total centre line length is muttiplied by breadth and depth of suespective items of to get the total quantity at a time when cross wall or portion wall join with main wall the centre line length gets seduced by half of breadth for each junction.
*	Centre line method: This method is suitable for walls of similar cross-section have the total centre line length is muttiplied by breadth and depth of mespective items of to get the total quantity at a time when cross wall or portion wall join with main wall the centre line length gets neduced by half of breadth for each junction. Details of measurement & Calculation of Quantities:
*	Centre line method: This method is suitable for walls of similar cross-section have the total centre line length is mutiplied by breadth and depth of mespective items of to get the total quantity at a time when cross wall or portion wall join with main wall the centre line length gets reduced by half of breadth for each junction. Details of measurement & Calculation of Quantities: The complete work is devided into various items of work such
*	Centre line method: This method is suitable for walls of similar cross-section have the total centre line length is mutiplied by breadth and depth of sespective items of to get the total quantity at a time when cross wall or partion wall join with main wall the centre line length gets seduced by half of breadth for each junction. Details of measurement & Calculation of Quantities: The complete work is devided into various items of work such as earth work concreting, brick work, R.C.C. plastering etc.
*	Centre line method: This method is suitable for walls of similar cross-section have the total centre line length is mustiplied by breadth and depth of suespective items of to get the total quantity at a time when cross wall or portion wall join with main wall the centre line length gets seduced by half of breadth for each junction. Details of measurement & Calculation of Quantities: The complete work is devided into various items of work such as earth work concreting, brick work, R.C.C. plastering etc. the detail of measurement are taken from drawing and
*	Centre line method: This method is suitable for walls of similar cross-section have the total centre line length is mutiplied by breadth and depth of sespective items of to get the total quantity at a time when cross wall or partion wall join with main wall the centre line length gets seduced by half of breadth for each junction. Details of measurement & Calculation of Quantities: The complete work is devided into various items of work such as earth work concreting, brick work, R.C.C. plastering etc.

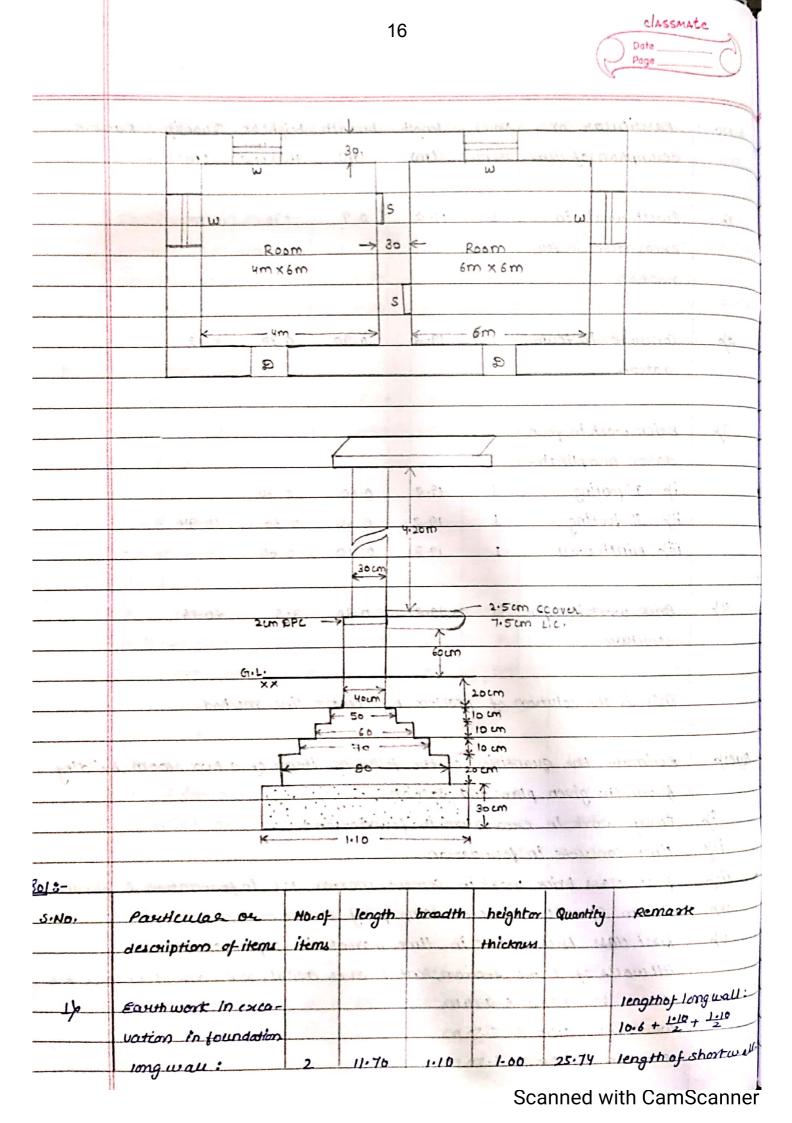


	de	uticulars scription o ems	or A	No. of la	ength	breadth	08			Remark on emplanatory Notes.
*		- of estin						may or	enweltuull Lusittava	4
(4 Y	item No.	Particul	ar or	Quantity	un	it Ra	le lon	oer uni Rote	2+ Amo	
<u>पट</u> ्ये०	single s	the plan. toom buil	ding	of (5x	4)m	& scc	tion :	repres	ent the C	אסננ- פככי
i} ii} iii} iv}	earth work in encavation in foundation. Convete in foundation. Brick work in foundation plinth. Brick work in super structure.									
3 = 3	0 +06-3	PIE	0.6	2.0	5.30	2.	-2	Hom Sul	b II foot if Hinth	
A STATE OF THE STA	30 7	3.5 0 K-40 7		5.0 - 5.0	2. 2.			ing.	draina d	i
		90-	300	30 cm				L.	Ayru AMB	
	A	4.50m	5.00	F 0	300	A		7-7-	Mary 1995	
			Ð					7		

S.NO.	Particular or desc-	10.01	length	width	heightor	Suantity	Remark or cap.
11010111	ription of items	item	(m)		thickness	1	lanatory notes.
MARCA	tookside.					- and he	
1/2	Eauthwork in exc-						length of long wall
	avation in founda-			Lucia	Lunde	12 12 1	= 5.50+.9 - 6.2
	tion: long wall	æ	6.20	0.90	0.70	10,044	short wall
	short wall.	a	3.40	0.90	0.90	5.51	= 4.30-0.9 \$ 3.4
	South Stead				Total ->	15.55m	AU-
2/0	Conviete in found.				111111	10	Jun No.
	long wall	2	6-20	0.9	0.3	3.35	
0 10	short wall	192 40	3.40	10.9	0.3	1.83	git is your
Tank Line	a sale dannaged as	page 1	1011	33 10	Total ->	5.18	No. 11
	the quantities of	- talken	illa	citabau	sy Asha	alimin.	101 /
<i>3</i> /2	Brick work in your	Line of	a pour	Lander	1.22152.11	L. ALBO	direct si
	dation and plinth				undakin	0 10 10	in Course
	Long wall:		1111	Marin gale	A Simulation	i draw	length of long wall
	ip I tooting	2	5.90	016	0.3	2.13	5-30+10.6 = 5.9
	ii) II tooting	2	5.80	0.5	0.3	1.74	3.30 + 0.5 = 5.8
8	iii) Plinth wall	2	5.70	0.4	0.6	2.14	5.30+014-5.7
	short wall:					Wang Carlot	tength of shortwall
	ip I footing	2	3.7	0.6	0:3	1.33	4.3-0.6 = 3-7
	iip II tooting	2	3.8	0.5	0:3	1.14	4.3-05 = 3.8
- 11	illy plinth wall	2	3.9	0.4	0.6	1.87	4.3-0.4 = 3.9
		-			Total	10.95	Note West to the second of the
4)0	Brick work in super					Port Control Hard Hillson	The second secon
· II	Structure.					AL DE LEGISLATION OF THE PARTY	
		2	5.6	613	3.5	11.76	
			4.0	0.3	3.5	8.40	and the second s
			- Fritzer & Co. Common A			20:16	
The state of the s							



No. F	Particular or	No. of	lenoth	breadth	heightor	Quantity	Remark
de	escription of items.	itemu	(m)	(m)	thickness		
) E	with work in	1	19. 2	0.9	•98	15:55	
e:	xcavation in fou-			1			
n	dation.						
/	movete in town-		19.2	0.90	0.36	5.18	
3)\ B	orick work in youn-						
a	lation and plinth.				,		
i)	. I toating	1	19.2	0:60	0.30		1
	. I tooting	1	19.2	0.50	0.36	10.94	
	e plinth way.	1	19.2	6,40	0.60		
	rick work in super	1	19.2	0.30	3.5	30.16	
7.	his is the solution	of p	roblem b	y centr	e line m	ethod.	
	stimate the qua				items of	a two se	oom builo
	rem the given pl						
***	auth work in e			undatin	o		
	i <mark>me Concuete in</mark>						
	ist closs brick						m & plin
84	5.5 cm cement o				. 1		
	first closs brick						
	HI walls of sam	e secti	on; linh	al over	d0025, W	lsame !	sum thick
-	2000s: 1.20 m	× 2.10	m			5 3 4	
- 0	vindow: 1.00	1.50	m			N. A.	
	cawage: 1.00)	1.50	m	07.44			



	classmate	5
1	Date	(1)
(Page	
6		-

	shortwall:	3	5.20	1.10	1		6-3 - 1-10 - 1-10
	concrete in foundation	To the street			A STATE OF THE PARTY OF THE PAR	تأميطيسة	
e,b						Title dell	
	short wall:	2	11:70	1.10	0.30	7 . 12	
		-3	5-20	1.10	0.30		
	The second				Total ->	12.86	
						a restan	out for
3>	1st days brick work	112	1				185
	in cement mortar 1:6		041:1				
and the latest services of	in foundation.	1 /3				- 1/40	
	long wall:		-				
	ib I footing	2	11.40	0.80	6.2	3.65	100
	ii/ II footing	2	11:30	0.70	0.10	1.58	
	iii/ III footing	2	11.20	0.60	0.10	1.34	Little 1
	ivy TV tooting	2	11.10	0.50	0/10	1.11	100 Ju
	up plinth.	2		0.40	0.80	7,64	
	Smill enter						
	Short wall;						
-	ip I dooting	3.	15.5	0.80	0.2	2.64	in a dead
	iip I tooting		11051600		0.10	1.17	+0
	iiip III footing	3	5.7	10.60			i-o-di
	iup IV tooting	3	5.8	02:0	010	0.87	sans A 2014
11	up pilat	3111	5,9	0,40	0.80		Ancia, dia
-				Proper		\$6.08	- Committee of the Comm
		100 100	dram.	ile for			And in
d's				and his description of the second			
	a.s cm cement conc.						
The second second	damp proof cowne.					2	and the second s
-	dong wall:	2	11.00	04.0		8:30 m²	
-	short wall:	3	5.70	0.40	3 h 1 h 1 h 1 h 1 h 1 h 1 h 1 h 1 h 1 h	7.08	***************************************
	deduct door silk:	2	1.20	0.40		-0.96	
-					Total ->	14.92	

5>	First class brick	1111					A Second	
	work in time mortar			and a second dis				
	In super structure.				Control and Princip		62/0.2	
	Long wall:	2	1019	6:30	4.20	24.49	1444	
	short wall:	311.1	6:00	0.30	4.20	22.68	la-la-	
	Total & 18.85				Total ->	56:15		
	deduction in :							
	doors	2	1.20	0:36	2.10	1.51	12	46
	windows	Ч	1:00	0:3		1.80		
	Salunge	٩	1.0	0.2	1.5	0.60	1 11	
						11.000	11151	
	lintel over:	11 10	01141			ultan L	45	
	doors	201.00		0.30		10014	-(A)	and the section
	windows	400		0.30		6,23		
	s el nage	2	1.36			0112		
	A CINIDE	~	1.50	0.50	1 0.10	Line Of Canada		No. of the last of
		A32 10	1,	Tobal	deduction -	. Wille	- del	
es)	. 121 5 08 01	line m				45.75m	3	/+em
<u>(es</u>)o		line m	ethod the	re quant	Total -> Hities of	45.75m	swing	
	Estimate by centre	line m uilding	cthod the	re quant	Total -> Hities of	45.75m	ewing	
iþ	Estimate by centre of a two moom but	line m vilding vation ndation	cethod the Cprevious Infoundation .	ne quant us ques. lation.	Total -> Hities of	45.75m	awing	
i)b ii)b	Estimate by centre of a two moom but court work in excell	line m uilding vation ndation	ethod the Cprevious In townson.	ne quant us ques. lation.	Total -> Hities of	45.75m	awing	
i)> ii)> iii}-	Estimate by centre of a two moom but conth work in excauting concrete in four fixt class brick was	line m uilding vation ndation the in se	ethod the Cprevious In tound in .	ne quant us ques. lation.	Total -> Hities of if in four	the following	a bwing	
ijb iijb iiijb ivjb	Estimate by centre of a two moon but contin work in excauting concrete in four fixt class brick work 2.500 ye damp proof	line m uilding vation ndation the in se	ethod the Cprevious In tound in .	ne quant us ques. lation.	Total -> Hities of if in four	the following	swing	
ijb iijb iiijb ivjb	Estimate by centre of a two moon but contin work in excauting concrete in four fixt class brick work 2.500 ye damp proof	line m uilding vation ndation the in se	ethod the Cprevious In tound in .	ne quant us ques. lation.	Total -> Hities of if in four	the following	a bwing	
i)p ii)p iii)p iv)p	Estimate by centre of a two moon but contin work in excauting concrete in four fixt class brick work 2.500 ye damp proof	line m uilding vation ndation the in se	ethod the Cprevious In tound on	ne quant us ques. lation.	Total -> Hities of if in four	the following	a bwing	
iii} _iii}- _iv}-	Estimate by centre of a two moon but contin work in excauting concrete in four fixt class brick work 2.500 ye damp proof	line m uilding vation ndation the in se	ethod the Cprevious In tound on	ne quant us ques. lation.	Total ->	the following	a bwing	
i)p ii)p iii)p iv)p	Estimate by centre of a two moon but contin work in excauting concrete in four fixt class brick work 2.500 ye damp proof	line m uilding vation ndation the in se	ethod the Cprevious In tound on	ne quant us ques. lation.	Total ->	the following	a bwing	

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Note: For nectangular, circular, polygonal [hexagonal, ocrogonal, etc) building having no interior was wall this method is quite simple. for building having evers or partition walls for every junction of partition or cross walls with most wall special anxideration show have to be made to find the correct quantity for each junctions half breadth of the respective item or footing is to be diducted from the total centre length, In the case of a building with one partition wall or vious wall having two junctions for easithwork in foundation trench & foundation concrete deductions breadth of trench on concrete from the total center length for footing similarly deduction width of footing for two junction from the total central length & soon Height quantity breadth length. particulars or No. of thickness description of items itemu 42.9 39 ation in excavation. 0:30 39 lime concrete in fourdation foundation & plinth 6.29 0.20 0.80 I tooking 010 0.70 39.4 II footing 2.37 0100 0.60 39.5 III footing 2.00 0-10 02.0 39.6 IV footing 12.70 0.40 0.60 39.7 26.12 m3

0.4

0.3

39.7

39.8

SINO.

1)0

20

3/6

4/0

D.P.C. ZIT CM L/C

F.C. B. w. in Super Str.

50.14



1	Date / /
	Labour required for different works:
1471EAUEZ)	Eauthquake per 28.3 m3 (1000 cubic.feet) 3-
- 6	Execution in soundation, trenches etc in ordinary soil inclu-
<u> </u>	Excavation in journalism, remers 30
1 40 11	ding disposal upto 30m (100 feet) & lift 1.5m (5 feet) =
6 ⁻¹ .	5 beld and 4 mazdown can do 28-3 m3.
	a in du sundation, plinth etc. including
	Refilling exeavated easth in foundation, plinth etc. including
* , ,	consolidation in 15 cm layer = 3 balder, 2 mazolows and 1/2 Bisti
1900	can do 88.3 m ³ .
1 78	1 1 1 2 m (100 Mat) -
	pisposal of surplus earth with in a bad of 30m (100 feet) =
	1 majdoux can do 28 m3/day.
	Sundition data
ماآل	cement concrete work per 28-30 m3/day?
_ nk _ '\ '	Laying cement comercial = 2 baldar. 3 mazdour, 3/4 brusti.
	and 1/4 mason can do 2.83 m ² /day.
	to other
طرفان	RCC WOLK ?
	Laying reinfoured concrete = 3 beldas . 3 mazdoos , 1 & 1/3
Ajst.	bhisti and 1/2 mason can do 28-3 m3/day.
os et ino	The state of the s
->	sheltering shuttering for pate surface = + beldar & 4 (arpents)
	(II class) can do 9.6 m²/day.
_ - >	Reinforce work for Ra. = 1 black smith , 1 boldar can bald
	and peaced in position , quintal of steel / day.
વર્ષા	Boick work per 9-8.3 m3 (100 cubic feet):
	tisst claim boick work in 1:4 cement mousair in super stoucture
	partitlem walls, junction of rooks, perapates = 2 x 1/4 marries
	4 pl/2 nazdown and pristi can do 2-83 m3/day.
	Page No.
	A PART OF THE PART

Date ___ / ___ / ___

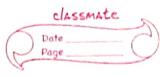


y b Random rubble masonry with	sime in joindation a warm.
3 holdar, 2 mazdoor p 1/4	phists can do 2.83 m2/day.
# Rates of Materials of Japour o	during 3013 in Luck now 2-
Materials	Statement of the
Brick 7 class	Rates
Brick II class	Rs. 4500 per thousand
	Rs. 4000 per inourand
Boick's hallast (Roda 40 mm size	$Rs. 350 / m^3$
Borck's hallast (25 mm)	Rs. 700/m ³
stone hallast (40 mmig	Rs. 1800 / m ³
Stone halloist (20 mm)	Rs. 1800/m ³
Stone rallast (12 mm)	Rs. 1700 /m3
Stone ballast (8 mm)	Rs. 1500 /m3
cement	Rs. 260 per hag
Steel no s	Rs. 4400 /quintal
white or crone time (unstack)	Rs. 650 Iquintal
white or stone line (clack)	Rs. 800/m ³
Suukhi	Rs. 500/m ³
Local sand	Rs. 700/m ³
sand course	Rs. 1000 1m ³
THE RESERVE OF THE PARTY OF THE	A CONTRACTOR OF THE PARTY OF TH
Lapaux	Rates
if Head mason (mistry)	Rs. 350 1 day
ily mason	Rs. 300/day
iii Reldar Mazdor	Rs 220 1day
ivu Boys 4 women contin	Rs 800 /day
vo shirti	Rs. 200/day
viy caupenser, Blacksmith, painter	Rs. 500/day

west	sime concrete in found white lime and sand			_	al-r-sur	4	
<u></u>	-120cl - 190c		-	The first	A WILL	- Jan	
	Pasiticulases.	quantity	Rate	ast.	garage		
مار	moserial	V			3,44,00,191	ija	
•	stone ballast of yamn	8.57	1800/-	15426	y Hidus	l di ii	
	gauge	ke			dies	144	
طرزز	sand (Jocal)	4.28		2996	call from	44	
,	white lime	2.14	800/-	1712	,		
			Total	20134	runioh	N/C	
ala	Labouse		N. S.	00010	stod to	3	
iy	Head mason	1/2	350/-	175	mount		
,	mason	1	300/-	300	mosom	N. 175	
•		12	220/-	2646	acasta.	40)	
, '	mazdoor woman coolie	10	200/-	2000	Впісні	N/S	
jub_	Bhisti		200/-	400	720 027	Nid	
طر1	Name of the Control o	lumpsump	1	100			
vi)	Tool & Plans, Petty	umpsump	700 6-3-				
	expenses.	, ,,,	**Total	5615	Total de		
				3870			
	20740						
	Total cast = 25749						
	toy of contractor profi	F = 101	C ~ 1 5 1 10	- 206.	92/_		
	1.5% of water charge	= 0.0%	0 10 1	_ 300.0	(3)		
	total cost for 10 m3						
	total cost for 1m3 =						
	03 45 6 4 1-110				Latel		
ver	Lime Concrete in terriace stoof with brick						
۵۲							
	with white sime and						
0,0	with Kankar line 145%	mortan)	unit I cu	meter (1)	m-).		

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	Date_	
12	Page	-(

The second second second	A A A A A A A A A A A A A A A A A A A	Quantity and	Rate	DIE NO COL
101:- 0)	Particulars	green	1 0000 000	and suit
طراب	maserial.	115	7001-	
ij	Brick ballast of asmm	and the same of th		
Contraction of the Contraction o	gauge.			Courte ela
,	swikhi		1	1600
iii)	white lime staked	1.67	1	1336
ivp	11		30/-	1.366
-dy	Bail fruit in solution	- lumpsump	100/- (1000	100
	63 1 B 1	21.5	Total	10396
مرح	Labour VEIDE	otos		
ip	Head_masen	1/2	350/-	2000/75 40
dij	moson	28 2 .\1	300/-	1 000 Vi
iiip	Mazdoor	MS. 12	220/-	2640
طرقا	woman coolie	24	200/-	4800
مررا	BhisH 1005	0002 01	200/- 01000	anayor di
vije	TRP Petry expenses.	Lumpsump	100/- 1.5.	
		con government		8715
				5 LUD (3 C)
	Total cost = 10396 +	37/5		
	= 19111}-		Track .	1
			00526 = 10	an lotar
NOTES INCOMES THE SECURITY OF	10% contractor profit	= 0.00 x 191		
	of 5 80.7 AC 000 y .	v Janua Saa	7/1/	1. 1.1.1
	0.5% worker about	all all all and a second	the state of	0 300
	0.5% water charge =			
	Tatal and the said	- 10 (1 5 % o	i have my have	1. 101-1-
Marie Principal de Marie Contra de Canada de C	Total cost for 10 m3 =			
	The state of the s	21308.76	answer in make	1 20017 - 11
parente contracter of a may subsect	2			
	$cost for 1m^3 \Rightarrow 2130$	8.76	hie vive and	113 drive 1 db
	1600	us Continue to	cotos line 140	A dries to
THE	⇒ 2/30.8	876/-		1 7 7 3 3
- 11				1, 19



		The state of the s	the state of the s					
6)	Particulors material:	Quantity	Rate	Cost				
,		A 4. 100	800/-	3600/=				
i)o		y.5						
iip		10	700/-	7000/-				
ilip	ll l	10 /9.	30/-					
طرہاز	Bail full in solh.	lumpsump	200/-	1				
	152.50 = 35.55)	10.0	Total	11100/-				
2 /0	Jabowi: same as white lime = 87	15/-	2000 100 100	101				
	1916		1 7015 400 100	nant 1				
	do, Total cost = 11100 + d							
	wind the more the	corp draw	1 mornon tue	Such tem				
	and susually produced	0 10 × 1081	c => 1981.5	1-1				
	10% of buildes profit >	0.70 X 7987	907.	395/_				
	15 % of water charge ⇒	0.015 X 148	15 9 411.	7.50/				
	total cost for 10 m3 => 22093.72 /-							
-	TOTAL COST AUT TOTAL							
	$cost \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	37/-	20: 1011					
4,0	$cost \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	37/-	1011 AU	12 13				
ver /0	$cost \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	in foundation	n or floor wit	h brick ballas				
rer b	$cost \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	in foundation	n or floor wit	h brick ballas				
<u>तल</u> ्रे	cast for 1 m3 => \$209.	in foundation	n or floor wit	h brick ballas				
<u>ख</u> ्रे	Cost for 1 m3 => \$209.	in foundation	n or floor with	h brick ballas				
<u>।स</u> ्र	Cost for 1 m³ ⇒ \$209. i Coment concrete (1:5:10) with 40 mm brick gauge un Particulars	in foundation	n or floor with	h brick Ballas				
<u>(el</u>)	cast for 1 m³ ⇒ \$209. i Cement concrete (1:5:10) with 40mm brick gauge un Particulars Material	in foundation it 1 m3. Quantity	n or floor with	h brick Ballas. Cast.				
<u>(ed</u>)0	Cost for 1 m³ ⇒ \$209. i Coment concrete (1:5:10) with 40 mm brick gauge un Particulars	in foundation	Rate	th brick ballas. Cast. 7800/-				
:- (eq)p	cast for 1 m³ ⇒ \$209. i Cement concrete (1:5:10) with 40mm brick gauge un Particulars Material	in foundation it 1 m3. Quantity	Rate 260/-	Ast. 7800/- 3500/-				
:- 1)0 i)p	Cost for 1 m³ = \$209. A Coment concrete (1:5:10) with 40mm brick gauge un Particulars Material Coment (1 m³ = 30 bags) Sand	in foundation in foundation it Im ³ . Quantity 30 bags	Rate	Ast. 7800/- 3500/-				
:- 1/2	Cost for 1 m³ = \$209. A Coment concrete (1:5:10) with 40mm brick gauge un Particulars Material Coment (1m³ = 30bogs) sand Brick ballost 40mm	in foundation in foundation it I m3. Quantity 30 bags	Rate 260/-	Ast. 7800/- 3500/-				
100 p	Cost for 1 m³ = \$209. A Coment comenéte (1:5:10) with 40mm brick gauge un Particulars material Coment (1m³ = 30 bogs) sand Brick ballost 40mm	in foundation in foundation it I m3. Quantity 30 bags	260/- 700/-	Cast. 7800/- 3500/- 17800/-				
100 ijp iijp iiijp	Cost for 1 m³ = \$209. A Coment concrete (1:5:10) with 40mm brick gauge un Particulars material Coment (1m³ = 30bogs) sand Brick ballast 40mm	in foundation it Im ³ . Quantity 30 bogs 5	Rate 260/- 700/- 650/-	Cast. 7800/- 3500/- 17800/-				
عران العلام العل	Cost for 1 m³ = \$209. A Coment comenéte (1:5:10) with 40mm brick gauge un Particulars material Coment (1m³ = 30 bogs) sand Brick ballost 40mm	in foundation in foundation it I m3. Quantity 30 bags	260/- 700/- 701- 701-	Tast. 7800/- 3500/- 6500/- 17800/-				
العلم المال	Cost for 1 m³ = \$209. A Coment concrete (1:5:10) with 40mm brick gauge un Particulars material Coment (1m³ = 30bogs) sand Brick ballast 40mm	in foundation it I m3. Quantity 30 bags 5 10	260/- 260/- 700/- 650/- 350/-	Cast. 7800/- 3500/- 17800/- 175/- 900/-				
1)0 1)0 1)0 1)1)0 1)1)0	Cost for 1 m³ = \$209. Coment concrete (1:5:10) with 40mm brick gauge un Particulars material Coment (1m³ = 30bogs) sand Brick ballast 40mm Labour: Head mason	in foundation it Im ³ . Quantity 30 bogs 5	260/- 260/- 700/- 650/- 704al 350/- 220/-	Ast. 7800/- 3500/- 17800/- 175/- 2640/-				
المنابع المناب	Cost for 1 m³ = \$209. Coment concrete (1:5:10) with 40mm brick gauge un Particulars material Coment (1m³ = 30 bags) sand Brick ballast 40mm Labour: Head mason mason	in foundation it I m3. Quantity 30 bags 5 10	260/- 260/- 700/- 650/- 350/-	Abrick Ballasi 				

	CLASS	MAt
	Date	The same of the
1	Page	
1		the water

שלנע	petti expenses.	Lûmpsump	200/-	200/-
	15 -1488 7	. 11	a college and a	Carlo A
-130	Total cost = 23185/-		wall trouch	ill will
. 1.7 1	CON-	£23	AND DESCRIPTION OF THE PARTY OF	The second secon
	lite moult 2	010 X 23/00	= 2318.5	/
. 4 30	1.5 of water charge			COMPANY OF
	total cost for 10 m3 =	25851.97/-	mail of the com	2010
	total cost for 1m3 =	2585.19/-		
	7/30/ 6	1166 -	dina Jarm Wa	
<u>مری </u>	Cement Concrete work	1:2:4) Incua	11119 401111 WOL	201 10
	take 10 m3.	-0	a salari la	- A-
	ARGE FOR THE THE THE	. Ougatily	Rote 101	Cost.
-	Particulars	No control of the second	- Commence	5.605
1/6	THATCHE		260/-	1
طرثر	Cement Coment			1
1		8.68	1800/-	15624
_1771	oftone ballast of 40 mm	0	Total	35882
410	Provides Roya	Pi .	columnus	old .
2/2	Labour :		7 100	de 1200 m
طزز	Head meson	1/2	350/-	1754
طرزز	mason	J	300/-	300
iiiy	majdoor	12	100220/-101100	2640
ولاد	boy L gloss coolie.	10	200/-	2000
1/h	bnisti	2	200/-	400
Vij	petti's expenses.	lumpsump	200/-	200
diiv	Formwork.	lumpsump	1500/-	1500
			Total	6878/-
				A CHARLES WHEN THE PARTY OF THE

	CIASSI IABC	2
5	Date	
1	Page	
8		

	In't at contractor and			
	10% of contractor profit =	0.10 X 4588	0 = 4268	8/-
	1.5% of water change = 1			
	T. I.			mit di
-	Total cost of 10 m3 work = e	17588.2/-	arte miles	100 : 100
			viore (Heldas	
uelp	R.C.C. work in beams, slab,	etc 1:2:4	unit 1m3 to	ike 10 m3.
		1000	F 2 602 print	Vp T4
16-	Particulars	Quantity	Rate	cost
1/2	material:			
-17	stone ballout damm gauge.	2.171	1800	3908.57
ii}	sand (coarse)			
iii}r	cement (66 bage)	8.68	260	1.7160
lub	steel , mild steel (1%)			1
	1cum = 78.59 /cum 80, 7.859.			
νþ	Binding whe		65 / Kg	
		U	Total	
			1 10 1200 10	
مزر	Labour:			
,	Head maion	701 1/2 may	350	175
ijb	moun	2	300	600
iā	masdoor and	12	220 1 11 11 11	
ivb	women & boys coolie.	20		4000
V)	BhisH mis 1503	5	200	
vila		۷۰۵۰	100.63.	
	Tlpl petry expenses.			8515 1-
03	- 37-4		7 oran	
_				
3/6	Bending, wanking, binding			
•1	of steel base in position.		244	
i)o	Blacksmith	88	300	2400
ii)	mazdoor	8	220	1760
iii)	The petty expenses.	14.	100	100
-	and the second of the the	12 40 61	Total	4260 /-

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			1			
ا طر	Cem	ring and shut	tering (Both	17 1/1619 7	100000000000000000000000000000000000000	101
		ction and dism		3211030	datam to	1714
ib		bes plans and	•	۲.٦٠	1500 L·s.	1.500
مزز	11	penter III clas		- Yelson by	300	1200
ii)p		zdoor (Beldans		4	1	
V/b	Na	ille tant About	Vicil Otton	doles como	1	
		l P and petty				
100	11	Para		1	Total	
3		1				in mount
700	SO 8 /	Total cost- =	4260 + 3780	+ 58778.5		
au.	11	= 750		., .		
Carin	L7-15	868	44.9	Locasa) =	40	was de
	02. 87.45.24	10% of contraction 1.5% of water Total cost of 10 Total cost of	charge = 6781	0.015 X 60431	.85 = 90	6-47/-
	07. NCA: 4	1.5% of water Total cost of 10	$m^3 = 673$	0.015 X 60431 .UDS /- 8-15/-	.85 = 90	6-47/-
respo	07.1 27.1 : p	Total cost of 10	$m^3 = 673$	0.015 X 60431 .UDS /- 8-15/-	.85 = 90	bone vi
<u>resp</u>	1)	1.5% of water Total cost of 10 Total cost of 10 RCC work in co Particulars Material;	Charge = $m^3 = 6781$ $m^3 = 673$ $m^3 = 673$	0.015 X 60431 . 105 /- 8.15 /- Suantity	m^3	house vi
(e)p	المرابع المراب	1.5% of water Total cost of 10 Total cost of 10 RCC work in co Particulars Material:	Charge = $m^3 = 673$ $m^3 = 673$ $m^3 = 673$ $m^3 = 673$	0.015 X 60431 .D5 /- 8.15 /- Suantity 8.29	m ³ Rate	6.47/-
elp L:-	المرا المرا المرا	I.S.Y. of water Total cost of 10 Total cost of 10 RCC work in co Particulars Moderial: Stare ballost &co Gand (coarse)	Charge = $m^3 = 673$ $m^3 = 673$ $m^3 = 673$ $m^3 = 673$	8.29 9.14	m ³ Rate 1800	14922 2898
(e)p	طرا طرا اطران عرانان	I.S.Y. of water Total cost of 10 Total cost of 10 RCC work in co Particulars Moderial; Stanc ballost & co coment	$charge = \frac{m^3}{m^3} = \frac{678}{12}$ $charge = \frac{678}{12}$	8.29 9.14 8.7 > 83	1800 1800 260	1492 2898 21580
(e)p	طرا طرا اطران عرانان	Total cost of 10 Total cost of 10 Total cost of 10 RCC work in co Particulars Material: Stand (coarse) cement	Charge = $m^3 = 673$	0.015 X 60431 .175 /- 8.15 /- 2 unit 11 Quantity 8.29 4.14 2.7 ⇒83 1.549.	1800 1800 100 260 4400/9	1492 2898 21580
(es)p	را المرز المرز المرز المرز	Total cost of 10 Total cost of 10 Total cost of 10 RCC work in co Particulars Moderial; Stanc ballost & Gand (coarse) cement steel, mild steel Leum = 78.50/CL	$charge = \frac{m^3 = 678}{m^3 = 673}$ $charge = 673$	0.015 X 60431 • 175 /- 8.15 /- 8.29 9.14 2.7 ⇒83 1.549.	1800 1800 100 260 4400/9	Cost
(e)p	را المرز المرز المرز المرز	Total cost of 10 Total cost of 10 Total cost of 10 RCC work in co Particulars Material: Stand (coarse) cement	Charge = $m^3 = 673$	0.015 X 60431 .175 /- 8.15 /- 2 unit 11 Quantity 8.29 4.14 2.7 ⇒83 1.549.	1800 1800 100 260 4400/9	Cost
1: 1: 1: 1:	را المرز المرز المرز المرز	Total cost of 10 Total cost of 10 Total cost of 10 RCC work in co Particulars Moderial; Stanc ballost & Gand (coarse) cement steel, mild steel Leum = 78.50/CL	Charge = $m^3 = 673$	0.015 X 60431 • 175 /- 8.15 /- 8.29 9.14 2.7 ⇒83 1.549.	1800 1800 100 260 4400/9	Cost
121p	را المرز المرز المرز المرز	Total cost of 10 Total cost of 10 Total cost of 10 RCC work in co Particulars Moderial; Stanc ballost & Gand (coarse) cement steel, mild steel Leum = 78.50/CL	$m^3 = 673$	0.015 X 60431 • 175 /- • 15 /- • 29 9.14 2.7 ⇒ 83 1.549.	1800 1800 100 260 4400/9 65/kg:	Cost. 14922 2898 21580 69080



Total cost = 10.8610 + 8515	+ 4260 + 3780 > /	25/65
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10% of contractor profit = 12516 5 x 0.10 = 12516.5 1.5% of water charge = 125165 x 0.015 = 1877.47

Total cost of $10m^3 = 139558.97$ |-

(nominal size) bricks with coment, sand, mortage 1:6 - unit 1 m3.

Note: For Cement mortar 3°m3' dry mortar and for line mortar 3.5 m3 of dry mortar are taken for 10 m3 brick work. As an appro-

				11, 311
ज्यः-	Particulars		ojdoce	ice Viii
1/2	moterial:		Ligith coolie	leh Bou
jp	Bricks Ist class (500 Nos inloum)	5000	4500	225001-
jije	cement (14 bags)	0.45 (3)	260	3640/-
iije	sand later and question	9.7 (3)×6	700/=010	1890/-
			Total	28030/-
	-1003-4	-1 SAAA6	= invitad	<u></u>
370	Labour:			
ip	Head mason	1/2	350/-	175/-
	moson = 7 11 A × AUGUS	= 7 -2 (00)	300/-	2100/-
-iii>	majdoor	7	220/-	1540/-
dui	boy & girls coolie	S. 7 Sun	200/-	1400/-
ale	Briesti	2	200/-	400/-
Vijo	Petti experics	Tumpsump	200/-	2001-
			Total	5815/-
The Party of the P		Į.		

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13	Total cost = 28	030 + 5815 =	33845	10000			
	101/2 of contractor pr	rofit = 3.3845 X	0.10 = 3	384-5/-			
10% of water charge = 33845 x 0.015 = 507.67							
	Total cost of 10 m3	33737.17/-	- 100 mm	loyal			
a.	First class brick wo	rde in superstanctu	cre with 20 XI	X/0 cm brick			
01 80	with 1:6 cement,	sand mortage to	the unit im	rake 10m			
at the	- 1.1 102+00 1.1 - 1.	will commerce	al star haven	dasas			
Vol:- 1)	Total cost of modern	1al = 28030/-	(previous	questión)			
	Partellars	guantity	Rote	cost			
مرو	Japoner	and were to	wind has fo	200 200			
iye	Head mosen	1010 1 1/210 valo	350/-	175/-			
	mason						
iii	Majdoor	7	220/=100	1540/-			
	Boy & girls coolie	1	200/- 101	2000/-			
	BhisH	3003 2 (minha) 1814					
	Petty expenses	100 Lumpsump 1 111		200/-			
/	scaffolding	/umpsump		- 6415+300			
-1 0507	V						
	Total cost = 3444	45/- +300/-					
				Hodel 16			
	10% of contractor pro	ofit = 34445 x	0.10 = 34	44-5/-			
	1.5% of water change			671-			
Acres 61	2000	TE MAN		MALOUR VIII			
	Total cost of 10 m3 -	= 38406.17/-	aires control	The state of the s			
10.50	-1 N C	· Old	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	in the state of the			
		00110 01		1			
	Total cost of 1m3 =	Total cost of 1m3 = 3840.6/-					

	CLAS	somate	1
	Date _		2
C	Poge_		

Questo	Half brick wall (10cm thick fax Hiton wall) with 1:3 cement months
	unit 1m2 take 100m2.

0101:-	Particulars			1
4	Material	Quantity	Rate	Cost
ip_	brick fixt closs (500 NOS in cum)	5000	45001-	22500/-
		0.75 (3)	260 /	5980 -
	sand (coasse)	2.25 (1+3) ×3	1500/-	3375/-
ر طربا أ	mildsteel bor 6mm & every	4019	44 / 189	17601-
,	four layer	J		
			Total	33615/-
27	Jabour			
/	Head masen	1/2	350/-	175]-
طرزز	moum	12	300/-	3600/-
ן ווון	mazdoor	8	220/-	1760/-
	coolie	10	200/-	2000/-
طرب	BhisH	2	200/-	400/-
viþ	ocaffolding	1.5.	400 /-	400/-
- 11	PLT Petry expenses.	2.5.	100/-	100/-
			Total	8435

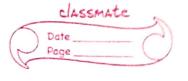
Total cost = 33615 + 8435

= 42050/-

10% contractor profit = $\frac{42050 \times 0.10}{1.5\%} = \frac{42050 \times 0.10}{1.5\%} = \frac{42050 \times 0.015}{1.5\%} = \frac{630.75}{1.5\%}$

Total cost of 100 m2 = 46 885.75 /-

Total cost of 1m2 = 468.85/-



arest !	coarse Rubble stone major
Carried .	coarse Rubble stone masonry in superstructure with different in
	1:4 cement, sand, mortag unit 1m3, take 10m3.
	STILL = 121 24 mg
	dry mortor 4 cum

		Grand	Prangulases -			
<u>sol:-</u>	Particulars		Quantity	Rate	Cost	
1/2	material:	7.63		nac	- COSE	
ip	Stone	20 :0.	12-5 cum	1200	15,000	
lip	Cement	(24 bags)	0.8 (4)	260	6240	
iii	wand (Local)	O	3.2 (4)×9	700	2246	
				Total	23,480	
2,10	Jabous	1/2	ula luni	ad masm		
1,6	Head mason	d	1/2 nos.		175	
طزنا	mason	81	10	300		
طرنا	mozdoor	F	16	220	3520	
dui	Coolie	2	10	200	2000	
44	Bhlsti		2.	200	400	
vib	scaffolding.		1.5.	400	400	
viib	T&P		L.S	100	100	
				Total	9420	

Total cost = 23480 + 9420 = 32900 /-

10% contractor profit = 0.10 x 32900 = 3290 /-

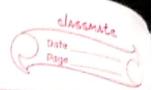
1.5% water charge = 0.05 x 32900 = 493.5/-

Total cost of 10m3 = 36683.5/-

Total cost of 1m3 = 3668.35/-



	unit 1m3, take 10ms,	in any	T'S CHIN I	9671)			
	Particulars	Quantity	Rate	Costs			
ط	material	3	raye	Cost.			
5)*	Stone (undressed)	13.8 cum	1000/-	12500			
عر	cement (11 bag)	0.35 (75)	2601-	2866			
عزز	sand	2-1 (215) 16	700/-	1470			
1	TO SHOW YES THE THE STATE OF THE SHOWS		Total	16830)-			
	,			12 11			
عر	Labour) Lake to		4			
ip	Head mason	1/2	250	175			
عزنة	moson	28 705.	300	8400			
مرازة	mozdoor	20	220	4400			
طربا	women coolie	20	200	4000			
	Bhisti	2	200	400			
	scaffolding	4.5.	400	400			
	TLP	L.S.	100	100/-			
_	1		Total	1			
	The same of the sa			17925/-			
+	Total Only - 1/220 : 178	996					
	$Total \ Cost = 16830 + 179$	<i>Q</i> .J					
	1010= 34755/-						
	10% contractor profit =	2425.5 /-					
	107- Commador propri	1.19261					
	10 C% 1112/11 15 21122 = 5			ATTENDED TO THE PARTY OF THE PA			
	1.5% warn charge = 5						
	Total cost of 10 m3 = 3						
	Total cost of 1m3 = 3875.18/-						



-	Note: material stequisted for plastering with different mortarios
-	vaccious purportions for 100 m2.

-> For 12 mm thick plastering , total dry volume 2 m3.

For somm thick plastering, total dry volume 3 m3.

oucil	12 mm	plastering	1:6	unit 1m2	Take	100m2
-------	-------	------------	-----	----------	------	-------

b/:	Auticular		Quantity	Rate	Goot.
1,5	material:		V		
وال	Cement	(9 bazs)	0.28 (2)	260	2340
11)0	dand. (Local)		1.68 (2)2	700	1176
2000	100.0	The state of the s		Total	3516
				750	tole Dipart
2)0	labour			911	come del
j)	Head mason		1/2	350	175
عرزز	moson		10	300	3000
الإنزز	mazdoor		15	220	3300
ivp	Ghish		1	200	200
- dv	Scaffolding		۷۰۵۰	400	400
vijo	TLP		200	100	100
				Total	7175

Total cost = 3576 + 7175

= 10691/-

10% Contractor profit = 1069.1/-

1.5%, water crarge = 160.36/-

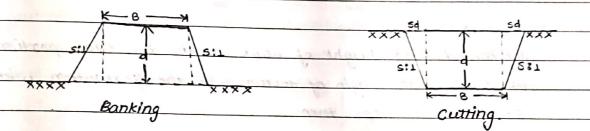
Total cost of 100m2 = 11920.46/-

Total ast of 1m2 = 119.20/-

Road Estimate

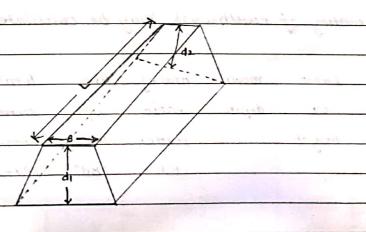
Earthwork:

Cross section of earthwork of rood in bonking or in cutting is usually in the form of trapezium and the quantity of earthwork may be calculated by the following method.



Quantity or Volume = sectional area x length.

Quantity = $(Bd \times Sd^2) \times L$

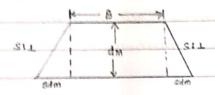


 $mean depth = \frac{d_1 + d_2}{2}$

The quantity of earthwork may be calculated by the various method of mengunation.

Method - I &mid sectional Axes method (1)

Quantity = Area of mild section x length.



det the di & de height of bank at the two ends portion of embank. ment. L is the sength of section, B the formation width and S: 4 the side slope then ,

Area of mid section = Bdm + 1 Sdm2 + 1 Sdm2

Bdm + sdm2

Quantity of earth work = $(Bdm + Sdm^2) \times L$

The quantity of earthwork may be calculated in a tabular form.

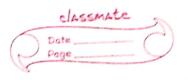
ЫW	Quantity (Bd + Sd1)
	emban- out
	kment
	1

#

method II :

Mean dectional Area method

Buontity mean sectional area X Jength.



sectional area at other end = $A1 = Bd1 + Sd1^2$ sectional area at other end = $A2 = Bd2 + Sd2^2$

The mean section asses = A = A1 + A2

quantity $g = \left(\frac{A_1 + A_2}{2} \right) \times length.$

The quantity of easithwork may be calculated in tobular form.

section	Height	Area of	Area of	Total	mean	Jength	guanti	ty
				sectional				
		1	1	anea			1	
J			1	(Bd+Sd2)			ment	
	34	1200	6.4					

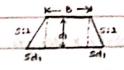
method III ?-

Prismoidal formula method:

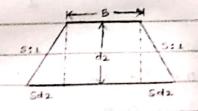
Suantity or volume = 1 (AI + AZ + YAM)

Hores

AI = cross section area of one end (BdI+ Sdi2)



 $A2 = Bdz + Sd_z^2$



$Am = 8dm + Sdm^2$	K	1
Here	5:1 / dm	511
$dm = d_1 + d_2$		
2 Q	Sam	Sam

Prismoidal formula is more accurate than calculated by the previous

Auco of Side sloping surface :-

The mean sloping breadth = $\sqrt{(sd^2) + d^2} \Rightarrow d\sqrt{s^2 + 1}$

: d = stands for mean depth.

Area of both side slopes = $2 \times \left(d\sqrt{s^2+1}\right) \times L$

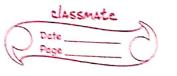
 \Rightarrow $2L(d\sqrt{S^2+1}).$

uest Calculate the quantity of earthwork for 200 meters length for a postion of a road in an uniform ground the heights of banks at the two ends being 1.00 m and 1.60 m. The formation width is 10 meters and vide slopes 211 (Harizontal: Vertical) Assume that is no transverse slope.

of:- method I: "B = 10m, s = 2, L = 200mQuantity = $(Bd + Sd^2) \times Jength$

: d = mean depth = 1.00 + 1.60 = 1.30 m

So, Quantity = $(10 \times 1.3 + 2 \times 1.3^2) \times 200$ = 3276 cum.



method II:

 $A_1 = \sec \alpha \cot \alpha + \cot \alpha = 8d_1 + 8d_1^2 = 10x_1 + 2x_1^2 = 12s_2 \cdot m$ $A_2 = \sec \alpha \cot \alpha + \cot \alpha = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2 + 8d_2^2 = 10x_1 \cdot 60 + 2x_1 \cdot 60 = 8d_2^2 = 10x_1 \cdot 60 = 8d_2^2 = 10x_1^2 = 10x_1 \cdot 60 = 8d_2^2 = 10x_1^2 = 1$

\$1.15.26.W

mcan sec. area = A1 + A2 = 12 + 21.12 = 16.56 scm.

Quantity = mean sec. area x length = 16.56 x 200

Quantity = L (A1 + A2 + 4 Am)

A1 = 12 cg.m

A2 = 21.12 sq.m

Am = mid sec. area = Bdm + Sdm2

where, dm = 1.00 + 1.60 = 1.30m

Am = 10 x 1-30 + 2 x 1.302 = 16-38 sq.m.

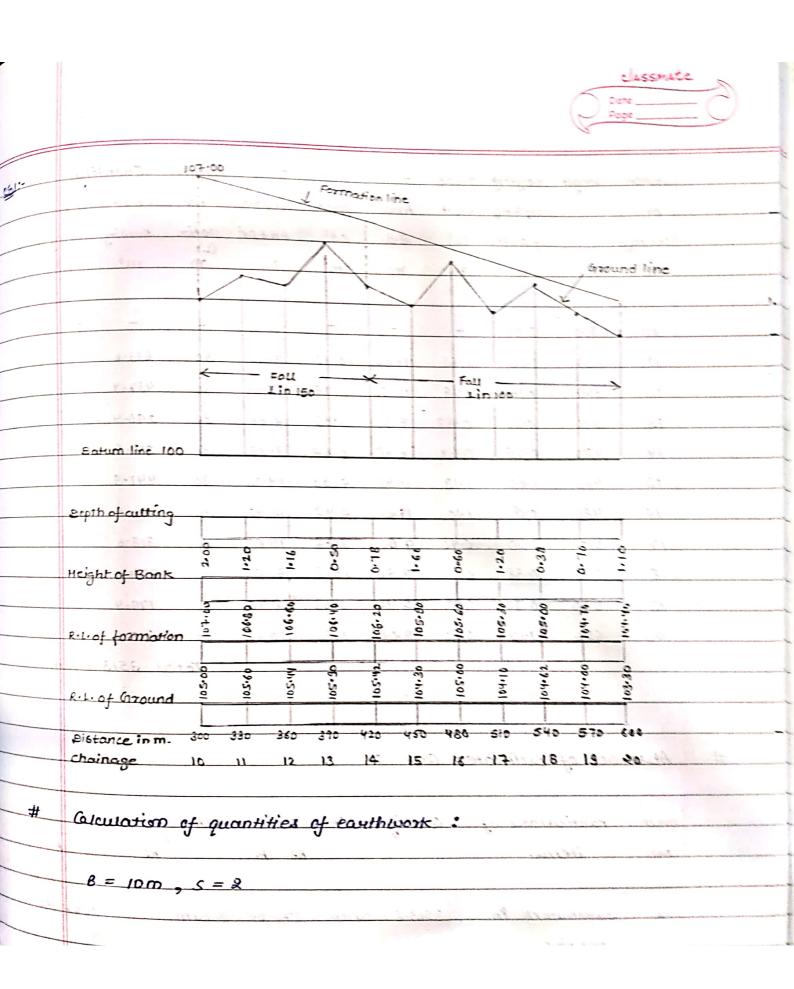
:. Quantity = 200 (12+21.12 + 4x 16.35) = 3258 cum

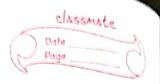
Note: The difference by Method I and III is less than 1/2 percent.

Calculate the ance of the side slope of partion of a bank for a length of son metre the heights of banks at the two ends being 2.50m and 3.50m and the ratio of the side slope 2:1.

iib 36 the side slopes area to be provided with Kem thick ofone

	Calculate the cost of pitching at the state of Rs - 150/- per cum
10.5-61	leve + (v.) = fink + inh + has note to success to
مرز -: ل <u>ي ي</u>	mean height, $d = \frac{2.5 + 3.5}{2} = 3m$
20,000	1211
	sloping breadth of the mid - section = $d\sqrt{(s^2+1)} = 3\sqrt{(z^2+1)}$
- PA	(A)
,	Area of the two sides slopes = 21 x d d(s2+1)
	$= 2 \times 200 \times 6.71 = 26.84 \text{ sq.m.}$
	Quantity of pitching = Area x thickness
	= 2684 X .15 = 402-6 wim
	Cost of stone pitching = 402.6 x 150.00 = Rs 60390.00,
oriesh	Reduced Level (R.L.) of ground along the centre line of a proposed
	road from chainage 10 to chainage 20 are given below. The formation
	level at the 10th chainage is 107 and the sead is in downward
	gradient of 1 in 150 up to the chainage 14 and then the gradient changes to 1 in 100 downward. Formation width of mad is 10m
	and side slope of banking are 2:1 (Horizontal: Vertical) · length
	of the chain is 30 metre.
- 11	Decous songifuednal section of the second and a typical cross section
	and prepare an estimate of courthwork or the rate of RS ? 75.00
	cu·m.
San Andrews	Note: I've difference by medical French III is to steam it
- <i>ip</i>	find also the area of the side slopes and the cost of turking the
- 11	side slopes at the rote of Rs. 60.00 % sq.m.
Hanrie	the to the same of the wide copy of private or in the form
SULLY C	chaininge 10 11 12 13 14 15 16 17 18 19 20
	R.L. of ground. 105.00 105.60 105.47 105.90 105.42 104.30 105.00 104.10 104.62 104.00 104.
11	R.L. of formation 107.
H	





station_	Jangth	Heightof.	mean	central	Side	Total		1	V
-07		वक्षा वर्षे.	alepth	Area	ayea	seeare.	in blu	_CBd+S	95)1
Chainage M.	_m·	cfailte m	_(d) m	B-d- m²	sd ¹	8d + Sd ²	statien (L) m	Banking.	cu#ing m³.
10	300	2.00	_	_				_	_
	330	1.20	1.60	16-60	5.12	21-12	30	653.6	_
12	360	1-16	1.18	11.80	2.78	14.58	_30	437.4	-
13	390	0.50	0.83	8:30	1.38	9-68	30	290.4	- 1
14	420	0.78	0.64	6.40	0.82	7.22	30_	216.6	_
15	950	1-60	1.19	11.90	4.83	14.73	30_	441.9	_
16	480	e-60	1.10_	11:00	2.42	13-42	30	402.6	-
17	210	1.20_	0.90	9:00	1.62	10.62	30	315.6	_
18	540	0.38	0.79	7-90	1.25	9.15	30	274.5	_
19	570	0.70	0.54	5.40	0.58	5.98	30	179.4	_
20	600	1-10	0.90	9-00	1.62	10.62	30	318.6	_
			- CONTRACTOR - CON				Total	च 3513	•6 cur

# Abstract of Estimated	OHL	_:
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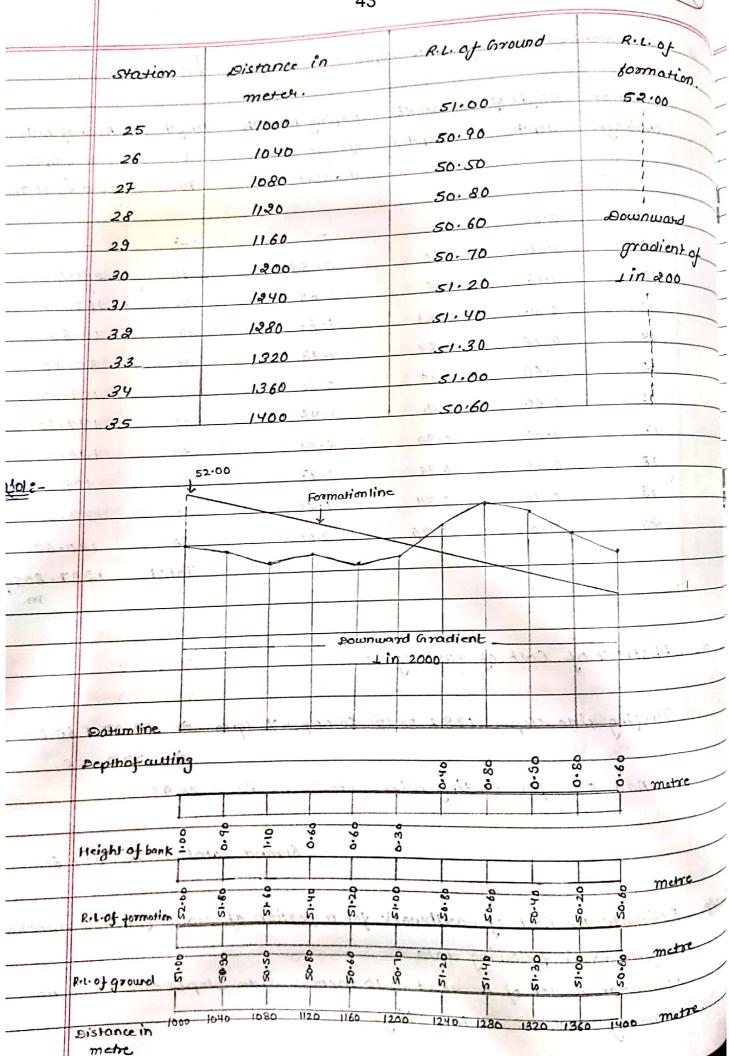
1	1	1				
Stem_ No.	Particulars of	Quantiz	unit	2	a Petro	
1 1				Rs. P.		Rs. P.
1.	Earthwork in	3513.6	a.m.	275.00	7. cum	9662.40
	J			Total	,,,,	9662.40
Add	1 57 [3% for contin	gencies	e sy fe	r werkthe	vged)	. 483.12
		W.	Gr	and Tot	<u>lal</u>	Rs 10145.58

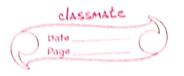
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				pes : S = g		
	station or		mean Ht.	sloping breadth	length	Area of both
	chainage.	depth.	or depth d	of side slopes		side slopes
		The same	m	$d\sqrt{s^2+1}$ m.	m.	2L d \s2+1 m
	120	0	h 102	0.90		
	10	2.00	5-0-	- gal	_	
	A. 11. 150	1.20	1.60	3 - 58	30	214.80
	12	1.16	1-18	2-64	30	158.40
		0:50	0.83	1.86	30	111-60
	14	0.78	0.64	1.43	30	85.80
	15	1.60	1-19	2.66	30	159.60
	16	0.60	1-16	2.46	30	147.60
	17	1.20	0.90	2.01	30	120.60
	J.8	0.38	0.79	1.77	30	106-20
	19	0-70	0-54	1.21	30	72.60
	~ ১	1.10	0.90	2.01	30	120.60
					Total	1297·8059
#	Tunfing &	ide slopes	t turting 1297.80 (9 60-06 per 1. sq.1	-	97 X 60·00 78 • 68
حداه	Estimate	the Cost of	- conthwork	for a portion of	otal ; R	

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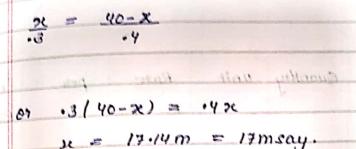
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The second passes from banking to cutting in blu the stateon 30 (1200m) and 31 (1240m). The distance where it passes through zero.

The two triangles on either side of zero point are symmetrical



is 40-17 = 23 m.

(calculation of earthwork) Calculation of quantities: # 1.5 for cutting. 6=10m , S= 2 for banking , S= Quantity (ms) Area of side Total Jec. eish in central mean ht.or Height or Distance tation (Bd + Sd2) L area (Birst) b/w station es (sda) area (Bd) depth d depth dill of Banking Cutting (L) m. mi m. 777. a.L. E. FL. 25 1.00 1000 452.40 11.31 40 1.81 9.50 0.95 0.90 26 DYOL 480.00 . HOY 13.00 2.00 10:00 27 1080 1.10 398.00 . 40 9:95 1.45 8.50 28 1120 0.60 268.80 40 6.75 0.72 6.00 0.60 39 1150 0.60 196.40 40 4.91 0.41 4.50 0.45 1200 0.30 18 from sanking to cutting. 26.35 1.55 0.05 1.50 0.15 1217 0.00 44.38 23 2.06 0.06 -31 2.00 -0.20 1240 -0.40 261-60 40 6-54 0.54 3.0 6.00 -0.60 1280 - 0.80

								Date Page	=(
93	13.80	-0190	-0.85	8.50	1.08	9.58	40		38
34	1360	-0.80	- 0.85	8.50	1.08	9.58	40.	-	38
35	1400	- 0.60	-0.70	7.00	0.74	7.74	40	-	309
		sign_indico	tes cutting)	and the second second		Total	1821.95	13:
		0	U	10.00				cum.	Lu
	Hem	Particular		Quantity	unit	Rate	per	1 60	υt
				2	1,,,,,	Pate	net	Co	
		Para auto	w_0,7	guaring	wiii	Ruce	Por		-
	No.	items.	•	Quantity	25 1		'	Rs.	
			•	Quanny			'		
	No.	items.		V 000	76 V		ρ	Rs.	
	No.	items. Eouthwork	in banking	1821.95	w.m.	Rs.	o % cu	Rs. m 501	0.3
	No.	items.	in banking	1821.95	w.m.	275.0	o % cu	Rs. m 501	
	No.	items. Eouthwork	in banking	1821.95	w.m.	275 · 0	o % cu	Rs. m 501	0.3
	J.	items. Eouthwork	in banking	1821.95	cum.	275 · 0 350 · 0	o % cu	Rs. m 501 m 48	0.3

A least a water is defined at the Capital cut
aux furchase : Years purchase is defined as the capital sur
quired to be invested in order to receive on annuity of Relie
l contain rate of littest.
Year furthase = 100
Rate of Intrest
The state of the s
salescence: The value of property at itrultures become un
y its becoming out of vate in style in structure, in design et
nd this is served as obsalescence.
The second secon
muity: Annuity is the annual periodic payments for repay
ents of the capital amount invested by a party.
- I have briteried all
rteable value: Rateable value is the net annual setting value
a property which is obtained after according the ancural of
eavily repair from the gran income.
nethods of valuation:
ental method of remation: In this method the net income!
an of rent is tendout by deducting all autorings man the
on rert.
suitable rute of interest as prevailing in the neutre is assured
a yeary purchase is calculated. This not income multiplied by

D-4-			
Date	_	/	1



	Saathi)
4100	purchase gives the conjugation
W.	nethod is applicable contralized value or valuation of the property. Inis
	unon the reservation to
	The state of the s
MANA	supported willy the capital value: This we that isom he adopted
	the available Jum the proposity concerned to such
	apartilled walle of the proporty is sixon by direct compartin
	appearing of civilor property in locality.
	S BAR DALLE BALL GREATER TO THERE THE STATE OF THE STATE
طلا	Valuation based on proper ? This method of valuation is suitable for huid-
	They like botels, cinemal, theatres etc. which the corpitalized value depends
	on the profit
ive	Valuation Based on cost: In this without the actual and of incurred in
	emstructing the building or in panoming the property is poten as base.
	to deturine the rules of property. In such cases, recensury depretiation
	Should be allowed and points of should should also be considered.
	The state of the s
ط٧	bevelopment method of valuation: This method of valuation is used for
	the properties which are in the underdeveloped stage or partly developed
	or partly underdeveloped stags. If a large place of land is required
	is no desired into plot after providing for souds, parks etc. this method
	of relucition is admitted.
	If a building is required to be renorated by naking additional changes,
	astornations or improvements the development method of valuation by
	may be used.
MA.	- Way
vil	Depreciation method of voluation: According to this method of valuation
	the building should be divided into four paids;
H	wall by Roofs ch Hook dy poors and windows.
4	and the cost of each part should first be calculated on the present
	day rates by detailed measurement
	any saws my assured
i i	Page No.



	Date / /
ausoje	An old building has been purchased by a person at a cost of the rand. eastweet the of Rs 30000 per excluding the cost of the rand. eastweet the amount of annual sinking fund of 4% interest assuming the future life of building as 20 years and scrap value of building as 10% of the cost of purchase. Find out the annual installment of sinking fund. S = Yotal amount of sinking fund at the end of 20 years.
Samo	S = 10tal amount of surving for a large without of surving
	$3 = 30000 \times 90$
8 h	S = 27000 - 112 a raph and outside
	$\kappa \sigma \omega$,
	Annual Installation (1) = Si
	$(i+i)^{n}-1$
1	We Divertigence of mattern of transporting :
	$\hat{i} = 4 = 0.04$
	100
Las	
	n = 20
	So,
	$J = 27000 \times 0.04$
	(1+0.04) &0 -1
	I = 907-56 ************************************

Questo

A property fetched a net annual income of Rs. 900 deducting all outgoing work out the captainsed value of the property if the state of interest is 6% per anum.

001:-

Capitalized value = Net-annued Income X year purchase = 900 X 100

= 15,000.

Queip

A three storey building is standing on a plot of length measuring at 800 m² the plinth area of each storey each 400 m² the building is of R.C.C. frame attructure and the future life may be taken as 70 years. The building fetches a gross tente of Rs 1500 / month. workout the capitalised value of property on the basis of 64. net yield. For sinking fund 34 compound interest may be assumed. Cost of land may be taken Rs 40/m². Other data require may be assumed swined suitably.

do1:-

Gross income per year = 1800 x 12

/ = //8.000;

ourgoings:

→ repairs (10%) = 1800

municipal tax (20%) = 3600

management charges (74.) = 1260

other miscellaneous charges @ 2% of grass rate = 360

sinking fund (5) = \$ 400 x3 x 150 x 90% => 162,000

 $T = S_{i}^{t}$ $(t+i)^{n}-1$

i = 3y.

Assume

150 15 Rs/m2 am

I = 162.000 x 0.03 => 70853

(Annual sinking (1+0.03) 70 - 1

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	Total outgoings = 7722
1	who figures and for more than the formation of the format
1	So, Net income = aross income - outgoings
	= 18,000 - 7728
9.4	= 1027.7.
	4.61 × 609
\rightarrow	Capitalized value = Net annual income x 100
	000.21
	= 10×77 x 100
die	A series of the
Kini	= 171291.11
ASA	the first secretarian and an interest the secretarian
->!!	whole value of the property = capitalized value + cost of land
17 17	= 171291.11 + 800× 40
	= 203291.11
	To Calculate the value of property:
LLD Y	A Colonises Intends to oursebore a land of the one
	A colonisen intends to punchase a land of 1.00,000 sq.m. area docated in the suburb of a big city to develop it into plots of to
	sq. m each after providing necessary roads and parties and other
	amenties. The current vale prices of small plots in the neighbourd
	is Rs. 30.00 per sq. m. The colonier wants a net profit of 20% wor
	the modimum price of the land at which colonises may purchase
	the Land.
	- 150 mar 1 see to 110 in some construction of
01:-	Total area of land = 21,00,000 sqim.
y.l	deduct 30% for 400ds parks, etc = 30,000 sq.m.
	(for flot) Net area = 70,000 vg.m.
	No. of plots at 700 sq. m per plot = 70,000 = 100.
	700

velling price per flat @ Rs 30.00 up $m = 700 \times 30 = 21,000$ Total price from vale of all plots = $21,000 \times 100 = 21,000,00$

Deduct expenses:

عرانا

Cost of improving of land and duessing @ = 25,000

Rs 0-25 per oq.m

Cost of provincing metalled stock, drainage = 30,000 water supply and electrification @ Rs. 3.00

per square m. of whole sond (100000 x 3)

Engineer's and auchitect fees for swiveying = 63.000

planning, sub dividing and supervision @ 31
on the sale price = 2100000 x 3

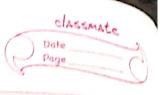
iv) Other miscellaneous expenses @ 1% on the = 21,000price = $21,000,00 \times \frac{1}{100}$

Calonises profit @ 20% on the sale price = 4,200,00

Total expenditure & 8,29,000

maximum price of sand in the undeveloped stage \Rightarrow = 2100000 - 8,29,000 = 12,71,000

maximum state of purchase of land
= 1271000 = 12.71 Sts Person.



<u>ues</u>	A city Corporation has to acquire an area of 3,50,000 sq.m. for
	the development of a new colony. After developing the ones it
	Proposed to be sold or Rs 3000,00 Per sq.m. workout the moreing
	compensation which can be given to the owners, whose Land is to
	be ocquired for the development of the colony assuming;
j)b	The corporation establishement changes = 15% of sale price.
ji b	40% anco is to provided for monds, parks, and other public
	omenities.
طربونر	Engineer's and purhitage to the transfer and to
,	Engineer's and authitect tee for surveying and planning the
	colony = 4% on the sale of Hats.
1:-	
23-	Total over of Jond = $3.50,000 \text{ sq·m}$
	part 40% areo for = 1,40,000 sq.m
	pouls, youds, etc
	Net ayeo = 2,10,000 sqm
4	Selling price per sq. m = Rs 3000
	Total price on sale = 9.10 page x 2000
	= 63,00,00,000
	00,000,000
	Deduct expenditure:
1,6	Corporation establishment
	Solephie (620,000
	Saleprice $\left(\begin{array}{cccccccccccccccccccccccccccccccccccc$
ii)	
	Colony Improvement expenditure @ 130 person = $4.55,00,000$
	$(B0 \times 3, 50,000)$ $= 9,55,00,000$
27%	
Info	Engineer's and auchitect fee for surveying and = 2,59,00,000
	Planning the colony @ 41. on sole
	100 X 63,00,00,000
4	

