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**SUB HEAD : 1.0**  
**CARRIAGE OF MATERIAL**

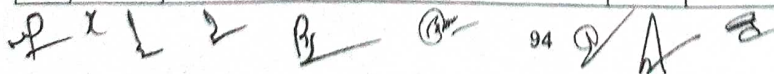
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# BCD Analysis of Rates 2022

## 1.0 CARRIAGE OF MATERIALS

(By Tipper )(cost of carriage is exclusive of GST and labour cess)

Sr no.	Ref. to M.O.R.T Spec.	Description	Unit	Quantity	Rate Rs.	Cost Rs	Remarks/ Input ref.
1.1		Loading and Unloading of Stone Boulder/Stone aggregates/Sand/Kanker/Moorum.	cum				
		Placing tipper at loading point, loading with front end loader, dumping, turning for return trip, excluding time for haulage and return trip					
		Unit = cum					
		Taking output = 5.5 cum					
		Time required for					
		i) Positioning of tipper at loading point		1 Min			
		ii) Loading by front end loader 1 cum bucket capacity @ 25 cum per hour		13 Min			
		iii) Maneuvering, reversing, dumping and turning for return		2 Min			
		iv) Waiting time, unforeseen contingencies etc		4 Min			
		Total		20 Min			
		a) Machinery					
		Tipper 5.5 tonnes capacity	hour	0.330	1371.0	452.43	P &M 6004
		Front end-loader 1 cum bucket capacity @ 25 cum/hour	hour	0.330	1366.0	450.78	P &M 5003
		b) Overhead charges @.08 on( a)				72.26	
		c) Contractor's profit @ 0.1 on (a+b)				97.55	
	Cost for 5.5 cum = a+b+c				1073.01		
	Rate per cum = (a+b+c)/ 5.5				195.09		
	Note Unloading will be by tipping.			say	Rs.195.10		
1.2		Loading and Unloading of Boulders by Manual Means					
		Unit = cum					
		Taking output = 5.5 cum					
		a) Labour					
		Mate	day	0.110	325.00	35.75	L-12
		Mazdoor for loading and unloading	day	0.750	306.00	229.50	L-13
		b) Machinery					
		Tipper 5.5 tonne capacity	hour	0.750	1371.0	1028.25	P &M 6004
		c) Overhead charges @0.08 on( a+b)				103.48	
		d) Contractor's profit @ 0.1 on (a+b+c)				139.70	
		Cost for 5.5 cum = a+b+c+d				1536.68	
		Rate per cum = (a+b+c+d)/5.5				279.40	
	Note Unloading will be by tipping.			say	Rs.279.00		
1.3		Loading and Unloading of Cement or Steel by Manual Means and Stacking.					
		Unit = tonne					
		Taking output = 10 tonnes					
		a) Labour					
	Mate	day	0.080	325.00	26.00	L-12	
	Mazdoor for loading and unloading	day	2.000	306.00	612.00	L-13	



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Sr no.	Ref. to M.O.R.T Spec.	Description	Unit	Quantity	Rate Rs.	Cost Rs	Remarks/ Input ref.
		b) Machinery					
		Truck 10 tonne capacity	hour	2.000	1371.0	2742.00	P & M 6004
		c) Overhead charges @0.08 on( a+b)				270.40	
		d) Contractor's profit @ 0.1 on (a+b+c)				365.04	
		Cost for 10 tonnes = a+b+c+d				4015.44	
		Rate per tonnes = (a+b+c+d)/10				401.54	
					say	<u>Rs.402.00</u>	
1.4		<b>Cost of Haulage Excluding Loading and Unloading</b>					
		Haulage of materials by tipper excluding cost of loading, unloading and stacking.					
		Unit = t.km					
		Taking output 10 tonnes load and lead 10 km = 100 t.km					
	(i)	Surfaced Road					
		Speed with load : 25 km / hour.					
		Speed while Returning empty :35 km / hour.					
		a) Machinery.					
		Tipper 10 tonne capacity					
		Time taken for onward haulage with load	hour	0.400	1371.0	548.40	
		Time taken for empty return trip.	hour	0.290	1371.0	397.59	
		b) Overhead charges @0.08 on( a)				75.68	
		c) Contractor's profit @ 0.1 on (a+b)				102.17	
		cost for 100 t km = a+b+c				1123.84	
		Rate per t.km = (a+b+c)/100				11.24	
					say	<u>Rs.11.20</u>	
1.4	(ii)	Unsurfaced Graveled Road					
		Speed with load: 20 km / hour					
		Speed for empty return trip :30 km / hour					
		a) Machinery					
		Tipper 10 tonnes capacity					
		Time taken for onward haulage with load	hour	0.500	1371.0	685.50	
		Time taken for empty return trip	hour	0.330	1371.0	452.43	
		b) Overhead charges @0.08 on( a)				91.03	
		c) Contractor's profit @ 0.1 on (a+b)				122.90	
		Cost for 100 t .km = a+b+c				1351.86	
		Rate per t.Km = (a+b+c)/100				13.52	
					say	<u>Rs.13.50</u>	
1.4	(iii)	Katcha Track and Track in River Bed/Nallah Bed and Choe Bed.					
		Speed with load :10 km / hour					
		Speed while returning empty:15 km / hour					
		a) Machinery					
		Tipper 10 tonnes capacity					
		Time taken for onward haulage	hour	1.000	1371.0	1371.00	
		Time taken for empty return trip	hour	0.670	1371.0	918.57	
		b) Overhead charges @0.08 on( a)				183.17	
		c) Contractor's profit @ 0.1 on (a+b)				247.27	
		Cost for 100 l .km = a+b+c				2720.01	
		Rate per t.Km = (a+b+c)/100				27.20	
					say	<u>Rs.27.20</u>	

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## BCD Analysis of Rates 2022

CARRIAGE OF MATERIALS( By Tractor )							
Sr no.	Ref. to M.O.R.T Spec.	Description	Unit	Quantity	Rate Rs.	Cost Rs	Remarks Input ref.
1.1		Loading and Unloading of Stone Boulder/Stone aggregates/Sand/Kanker/Moorum.	cum				
		Placing tipper at loading point, loading with front end loader, dumping, turning for return trip, excluding time for haulage and return trip					
		<i>Unit = cum</i>					
		<i>Taking output = 2.25 cum</i>					
		<i>Time required for</i>					
		i) Positioning of tipper at loading point			1 Min		
		ii) Loading by front end loader 1 cum bucket capacity @ 25 cum per hour			5 Min		
		<b>a) Labour</b>					
		Mate	day	0.050	325.00	16.25	L-12
		Mazdoor for loading and unloading	day	0.310	306.00	94.86	L-13
		<b>Total</b>			<b>6 Min</b>		
		<b>a) Machinery</b>					
		Tractor 3.6 tonnes tonnes capacity	hour	0.100	629.00	62.90	P & M12001
		Front end-loader 1 cum bucket capacity @ 25 cum/hour	hour	0.083	1366.0	113.38	P & M 5003
		<b>c) Overhead charges @0.08 on( a+b)</b>				22.99	
		<b>d)Contractor's profit @ 0.1 on (a+b+c)</b>				31.04	
		Cost for2.25 cum = a+b+c+d				341.42	
		<b>Rate per cum = (a+b+c+d)/2.25</b>				151.74	
						<i>say</i>	<b>Rs.152.00</b>
	1.2		<b>Loading and Unloading of Boulders by Manual Means</b>				
		<i>Unit = cum</i>					
		<i>Taking output =2.25cum</i>					
		<b>a) Labour</b>					
		Mate	day	0.030	325.00	9.75	L-12
		Mazdoor for loading and unloading	day	0.720	306.00	220.32	L-13
		<b>b) Machinery</b>					
		Tipper 3.6 tonne capacity	hour	0.310	629.00	194.99	
		<b>c) Overhead charges @0.08 on( a+b)</b>				34.00	
		<b>d)Contractor's profit @ 0.1 on (a+b+c)</b>				45.91	
		Cost for2.25 cum = a+b+c+d				504.97	
		<b>Rate per cum = (a+b+c+d)/2.25</b>				224.43	
	<b>Note</b>	Unloading will be by tipping.			<i>say</i>	<b>Rs.224.00</b>	
1.3		<b>Loading and Unloading of Cement or Steel by Manual Means and Stacking.</b>					
		<i>Unit = tonne</i>					
		<i>Taking output = 3.6 tonnes</i>					
		<b>a) Labour</b>					
		Mate	day	0.030	325.00	9.75	L-12
		Mazdoor for loading and unloading	day	0.720	306.00	220.32	L-13
		<b>b) Machinery</b>					
		Tractor of 3.6 tonnes capacity	hour	0.720	629.00	452.88	
		<b>c) Overhead charges @0.08 on( a+b)</b>				54.64	
		<b>d) Contractor's profit @ 0.1 on (a+b+c)</b>				73.76	
		Cost for10 tonnes = a+b+c+d				811.34	
	<b>Rate per tonnes = (a+b+c+d)/2.25</b>				225.37		
					<i>say</i>	<b>Rs.225.00</b>	



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## BCD Analysis of Rates 2022

Sr no.	Ref. to M.O.R.T Spec.	Description	Unit	Quantity	Rate Rs.	Cost Rs	Remarks Input ref.
1.4		Cost of Haulage Excluding Loading and Unloading					
		Haulage of materials by tipper excluding cost of loading, unloading and stacking.					
		Unit = t.km					
		Taking output 3.6 tonnes load and lead 10 km = 36 t.km					
	(i)	Surfaced Road					
		Speed with load :15 km / hour.					
		Speed while Returning empty :25 km / hour.					
	a)	Machinery.					
		Tractor 3.6 tonne capacity					
		Time taken for onward haulage with load	hour	0.667	629.00	419.54	
		Time taken for empty return trip.	hour	0.400	629.00	251.60	
	b)	Overhead charges @0.08 on( a)				53.69	
	c)	Contractor's profit @ 0.1 on (a+b)				72.48	
		cost for 36 t km = a+b+c				797.32	
		Rate per t.km = (a+b+c)/36				22.15	
					say	Rs.22.10	
1.4	(ii)	Unsurfaced Graveled Road					
		Speed with load: 12 km / hour					
		Speed for empty return trip :20 km / hour					
	a)	Machinery					
		Tractor 3.6 tonne capacity					
		Time taken for onward haulage with load	hour	0.833	629.00	523.96	
		Time taken for empty return trip	hour	0.500	629.00	314.50	
	b)	Overhead charges @0.08 on( a)				67.08	
	c)	Contractor's profit @ 0.1 on (a+b)				90.55	
		cost for 36 t km = a+b+c				996.09	
		Rate per t.km = (a+b+c)/36				27.67	
					say	Rs.27.70	
1.4	(iii)	Katcha Track and Track in River Bed/Nallah Bed and Choe Bed.					
		Speed with load :10 km / hour					
		Speed while returning empty:15 km / hour					
	a)	Machinery					
		Tractor 3.6 tonne capacity					
		Time taken for onward haulage	hour	1.000	629.00	629.00	
		Time taken for empty return trip	hour	0.667	629.00	419.54	
	b)	Overhead charges @0.08 on( a)				83.88	
	c)	Contractor's profit @ 0.1 on (a+b)				113.24	
		cost for 36 t km = a+b+c				1245.67	
		Rate per t.km = (a+b+c)/36				34.60	
					say	Rs.34.60	

Note वैसे स्थल जहाँ पर Truck एवं Tipper के द्वारा दुलाई किया जाना संभव नहीं है तथा Tractor से दुलाई Economical हो केवल वैसे ही स्थलो के लिए Tractor से दुलाई का प्रावधान किया जाय ।

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