WS-02

EWCE- [redacted] 09
GROUP- 5+6

0.001"

MILITARY INSTITUTE OF SCIENCE AND TECHNOLOGY (MIST)
Department of Civil Engineering
Geotechnical Engineering Laboratory.

CONSOLIDATION TEST

Tested on & by	Bangladesh Forest Department	**Ring dimension**	Diameter-2.5 inch (63.5 mm) Area -4.91 $inch^2$; hight-0.787 inch	
Project name	Bhawal National Park			
Location		Water content	Initial	final
Boring No	01	Mass of ring	64.230gm	
Sample No	UD-1	Mass of (ring + wet)	190.992gm	
Sample depth	2-5 + 03 mm.	Mass of wet sample	125.514 Gm	
Sample description		Mass of dry sample	103.118 Gm	
		Mass of water		
		Mass of dry sample		
		Initial water content, w_i%		
		Final water content, w_f%		

Failure Condition:

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CONSOLIDATION TEST

Actual Load	150 KPa	Actual Load	200 KPa	Actual Load	250
Target Pressure	3.230	Target Pressure	6.460	Target Pressure	8.920

Date	Temp.	Elapsed Time (min)	Square Root Of Time (√min)	Dial Reading x10^{-4} (inch)	Date	Team.	Elapsed Time (min)	Square Root Of Time (√min)	Dial Reading x10^{-4} (inch)	Date	Team.	Elapsed Time (min)	Square Root Of Time (√min)	Dial Reading x10^{-4} (inch)
	26.3	0	0	31.0		27-8	0	0	43-5		28-8	0	0	56
	11	6 Sec	0.316	33-0		11	0.1	0.316	45-0		28.8	6 Sec	0.316	58.0
	11	15 Sec	0.5	33-5		11	0.25	0.5	45-5		28.8	15 Sec	0.5	59.0
	11	30 Sec	0.707	34-0		11	0.5	0.707	46-0		28-8	30 Sec	0.707	60.0
	11	1	1	35-0		27-8	1	1	47-0		28.7	1	1	61.0
	26.2	2	1.414	36-0		27-8	2	1.414	47-5		28-7	2	1.414	62-0
	26.2	4	2	37-0		27.7	4	2	48.5		28.7	4	2	63.0
	26.0	8	2.828	38.0		27.4	8	2.828	50.0		28.6	8	2.828	64-0
	25-9	15	3.873	39.0		27.3	15	3.873	51-0		28.6	15	3.873	65-0
	26-0	30	5.477	40.0		27.0	30	5.477	52.0		26-5	30	5.477	66.0
	25	60	7.746	41.0		25.0	60	7.746	53.0		27.0	60	7.746	67-0
	24-6	120	10.954	41.5		25.0	120	10.954	51.0		27.0	120	10.954	68-0
	24-5	240	15.492	42-0		24-1	240	15.492	55.0		26.0	240	15.492	69.0
	25.4	480	21.908	43.0		24-1	480	21.908	56.0		26	480	21.908	70-0
	25.	1440	37.947	43.5		28.8	1440	37.947	56.5			1440	37.947	70.5

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CONSOLIDATION TEST

Actual Load	800 KPa	Actual Load	200	Actual Load	50 KPa
Target Pressure	25.830	Target Pressure	6.460	Target Pressure	1.610

Date	Temp.	Elapsed Time (min)	Square Root Of Time (√min)	Dial Reading x10^{-4} (inch)	Date	Team.	Elapsed Time (min)	Square Root Of Time (√min)	Dial Reading x10^{-4} (inch)	Date	Team.	Elapsed Time (min)	Square Root Of Time (√min)	Dial Reading x10^{-4} (inch)
	28.8	0	0	70.5		28.1	0	0	89.0		29.1	0	0	77.5
	28.8	6 Sec	0.316	72.0		28.1	0.1	0.316	87.0		29.	6 Sec	0.316	76.0
	28.8	15 Sec	0.5	72.5		28.0	0.25	0.5	86.0		29.0	15 Sec	0.5	75.5
	28.8	30 Sec	0.707	73.0		28.0	0.5	0.707	85.0		29.0	30 Sec	0.707	75.0
	28.8	1	1	73.5		28.0	1	1	84.5		29.0	1	1	74.5
	28.8	2	1.414	74.0		28.1	2	1.414	83.0		29.0	2	1.414	74.0
	28.8	4	2	75.0		28.0	4	2	82.0		29.0	4	2	73.5
	28.7	8	2.828	76.0		27.8	8	2.828	81.0		28.8	8	2.828	72.0
	28.7	15	3.873	78.0		27.0	15	3.873	80.0		27.2	15	3.873	71.0
	28.6	30	5.477	80.5		26.2	30	5.477	79.0		25.5	30	5.477	69.0
	28.4	60	7.746	81.5		25.4	60	7.746	78.0		24.5	60	7.746	68.0
	24.5	120	10.954	86.0		25.1	120	10.954	77.0		24.5	120	10.954	67.0
	24.4	240	15.492	88.0		24.8	240	15.492	76.0		24.6	240	15.492	66.0
	24.4	480	21.908	88.5		24.7	480	21.908	77		24.6	480	21.908	65.0
	28.2	1440	37.947	89.0		29.1	1440	37.947	77.5		27.5	1440	37.947	64.5

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CONSOLIDATION TEST

12.5	Actual Load		Actual Load		
400 gm	Target Pressure		Target Pressure		

Elapsed Time (min)	Square Root Of Time (√min)	Dial Reading x10^{-4} (inch)	Date	Team.	Elapsed Time (min)	Square Root Of Time (√min)	Dial Reading x10^{-4} (inch)	Date	Team.	Elapsed Time (min)	Square Root Of Time (√min)	Dial Reading x10^{-4} (inch)
0	0	64-5			0	0				0	0	
6 Sec	0.316	63-0			0.1	0.316				6 Sec	0.316	
15 Sec	0.5	62-5			0.25	0.5				15 Sec	0.5	
30 Sec	0.707	62-0			0.5	0.707				30 Sec	0.707	
1	1	61-5			1	1				1	1	
2	1.414	61-0			2	1.414				2	1.414	
4	2	60-5			4	2				4	2	
8	2.828	60-0			8	2.828				8	2.828	
15	3.873	59-5			15	3.873				15	3.873	
30	5.477	58-5			30	5.477				30	5.477	
60	7.746	57-5			60	7.746				60	7.746	
120	10.954	57-0			120	10.954				120	10.954	
240	15.492	56-0			240	15.492				240	15.492	
480	21.908	55-0			480	21.908				480	21.908	
1440	37.947	54-0			1440	37.947				1440	37.947	

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