CHITTAGONG UNIVERSITY OF ENGINEERING AND TECHNOLOGY

Department of CIVIL ENGINEERING

Course No: CE-204 Course Title: Engineering Materials (Sessional)

Student ID: 1901 Group:

Experiment No	Experiment Name	Date
04	**Determination of Normal Consistency of Cement with Vicat Apparatus**	

Data Sheet

Observation No	Percentage of Water (%)	Penetration (mm)
01		
02		
03		
04		
05		

RESULT:

Percentage of Water required for Cement Paste or Normal Consistency = % (to the nearest 0.5 %)

Signature of Course Instructor

CHITTAGONG UNIVERSITY OF ENGINEERING AND TECHNOLOGY

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Course No: CE-204 Course Title: Engineering Materials (Sessional)

Student ID: 1901 Group:

Experiment No	Experiment Name	Date
05	**Determination of Initial Setting Time and Final Setting Time of Cement with Vicat Apparatus**	

Data Sheet

Time(Minutes)	Penetration(mm)

RESULT:

Initial Setting Time =

Final Setting Time =

Signature of Course Instructor

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Student ID: 1901 Group:

Experiment No	Experiment Name	Date
06	Determination of Fineness of Cement by Sieving	

Data Sheet

Observation No	01	02
Weight of cement sample taken, (gm)=W1		
Weight retained on sieve, (gm)=W2		
Fineness of cement (%) = (W1-W2) * 100/W1		
AVERAGE=		

Fineness of Cement = %

Signature of Course Instructor

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Student ID: 1901 Group:

Experiment No	Experiment Name	Date
07	Direct Compressive Strength of Cement Mortar	

Data Sheet

Age (Days)	Specimen No	Crushing Load	Specimen Area	Compressive Strength	Average Compressive Strength
03					
07					
28					

Signature of Course Instructor

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Student ID: 1901 Group:

Experiment No	Experiment Name	Date
08	Compressive strength of concrete cylinders and cubes	

Data Sheet (Cylinder)

Sl. No.	Age (Days)	Specimen Designation	Specimen Area	Maximum Load	Crushing Strength	Average Crushing Strength	Type of Failure
	3						
	7						
	28						

Signature of Course Instructor

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Student ID: 1901 Group:

Data Sheet (Cube)

Sl. No.	Age (Days)	Specimen Designation	Specimen Area	Maximum Load	Crushing Strength	Average Crushing Strength	Type of Failure
	3						
	7						
	28						

Signature of Course Instructor

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Course No: CE-204 Course Title: Engineering Materials (Sessional)

Student ID: 1901 Group:

Experiment No	Experiment Name	Date
09	**Specific Gravity & Absorption Capacity of Fine Aggregate**	

Data Sheet

Weight of Oven dry Specimen in Air, A (gm)	Weight of Pycnometer +Water, B (gm)	Weight of S.S.D. Specimen, S (gm)	Weight of Pycnometer+ Specimen+Water , C (gm)	Weight of Moist Sand, W (gm)

Signature of Course Instructor

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Student ID: 1901 Group:

Results

Test	Formulae	Calculations	Results
Apparent Specific Gravity, S_a	$\frac{A}{B+A-C}$		
Bulk Specific Gravity (Oven-dry basis), S_d	$\frac{A}{B+S-C}$		
Bulk Specific Gravity (S.S.D. basis basis), S_s	$\frac{S}{B+S-C}$		
Absorption Capacity (%)	$\frac{S-A}{A}\times 100$		
Free Moisture, M (%)	$\frac{W-S}{S}\times 100$		
Weight of Free Moisture (gm)	$\frac{MW}{M+100}$		

Signature of Course Instructor

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Course No: CE-204 Course Title: Engineering Materials (Sessional)

Student ID: 1901 Group:

Experiment No	Experiment Name	Date
10	**SPECIFIC GRAVITY & ABSORPTION CAPACITY OF COARSE AGGREGATE**	

Data Sheet

Weight of Basket in Air (gm)	Weight of Basket in Water (gm)	Weight of S.S.D. Specimen, B (gm)	Weight of S.S.D. Sample in Water, C (gm)	Oven-dry Weight of Sample, A (gm)	Air-dry Weight of Sample, H (gm)

Signature of Course Instructor

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Department of CIVIL ENGINEERING

Course No: CE-204 Course Title: Engineering Materials (Sessional)

Student ID: 1901 Group:

Results

Test	Formulae	Calculations	Results
Apparent Specific Gravity, S_a	$\frac{A}{A-C}$		
Bulk Specific Gravity (Oven-dry basis), S_d	$\frac{A}{B-C}$		
Bulk Specific Gravity (S.S.D. basis), S_s	$\frac{B}{B-C}$		
Absorption Capacity (%)	$\frac{B-A}{A} \times 100$		

Signature of Course Instructor

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Student ID: 1901 Group:

Experiment No	Experiment Name	Date
11	**Determination of Compressive Strength and Absorption Capacity of Brick**	

Data Sheet

Sl. No	Frog Mark	Specimen Area	Maximum Load	Crushing Strength	Average Crushing Strength	Absorption Capacity (%)	Average Absorption Capacity (%)

Signature of Course Instructor