Mortar master

Date:

Participant's information:

Name of the participant 1:

Name of the participant 2:

Name of the participant 3:

Name of the institution:

Address of the institution:

Phone number:

Email address:

Design report:

Q.) Design three cement concrete cubes of 150mm size. The lowest strength with the lowest visible honeycomb and low density will be awarded. The minimum cement content should be 300kg/m3, maximum water cement ratio 0.55, the aggregates to be used are 6mm, 10mm, 20mm. No chemical admixture is to be used. The design should be done using IS Code method, suitable penalty will be given for the teams who fail to follow the above constraints.

Cement properties:

Type of cement used:

Fineness % of cement:

Specific gravity of cement:

Consistency of cement (% of water required):

Initial setting time:

Final setting time:

Fine aggregate:

Size of aggregate:

Specific gravity:

Grading zone of FA:

Fineness modulus:

(Note: All entries are compulsory)

Coarse aggregate:

Specific gravity:

Fineness modulus:

Admixture used (if any):

Type:

Specific gravity:

Concrete Properties:

Water cement ratio:

Cement content:

Workability:

Method of Mixing:

Degree of supervision: (Rate on a scale of 1 to 10, 10 being excellent and 1 being negligent)

Additional materials added (if any):

Design procedure:

1. **Target mean strength:**

2. Water cement ratio:

3. Selection of water content:

4. Calculation of cement content:

5. Calculation of coarse aggregate and fine aggregate:

6. Absorption of CA/FA and free moisture in FA (if any):

7. Calculation of mix proportions including site correction:

8. Comments:

Signature of the Head of department: **Seal of the institution:**