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ET-581(A)

B.Tech. Civil (Construction Management)

Term-End Examination

00193 **December, 2018**

ET-581(A) : TESTING FOR QUALITY CONTROL

Time : 3 hours *Maximum Marks : 70*

Note : *Attempt any **five** questions. All questions carry equal marks.*

1. (a) Define soundness of cement. Explain Le Chatelier's test to determine the soundness of cement. 7

(b) Explain the procedure to obtain Specific Gravity of Cement. What is the utility of this test ? 7

2. (a) Define Aggregate Crushing Value of Aggregate. Explain the procedure to obtain it. 7

(b) Explain the procedure to carry out Bulking of Fine Aggregate Test. Discuss the significance of the test. 7

3. Differentiate between the following : $4 \times 3\frac{1}{2} = 14$

(a) True slump and Shear slump

(b) Initial setting time and Final setting time

(c) Segregation and Bleeding of concrete

(d) Destructive and Non-destructive testing methods

4. Write short notes on the following : $4 \times 3\frac{1}{2} = 14$

(a) Mortar Bar Expansion Test

(b) Aggregate Abrasion Test

(c) Acceptance Criteria of Concrete

(d) Method of Determination of Resistance to Wear for Tiles

5. Explain the following : $4 \times 3\frac{1}{2} = 14$

(a) Ultrasonic Pulse Velocity Test for Concrete

(b) Water Absorption Test for Clay Building Bricks

(c) Test for Performance of Admixture

(d) Compression Parallel to Grain Test for Timber

6. (a) Discuss the steps to determine Compressive Strength of Concrete. 7

(b) Describe Vee-Bee Test to obtain Workability of Concrete. Explain the utility of the test. 7

7. Write short notes on the conduct of the following tests : $4 \times 3\frac{1}{2} = 14$

(a) Soundness of Aggregates

(b) Elongation Index of Aggregate

(c) Load Bearing Capacity Test for AC Corrugated Sheets

(d) Rebound Hammer Test for Concrete