

**B.Tech. Civil (Construction Management)**

**Term-End Examination**

00652

**June, 2019**

**ET-581(A) : TESTING FOR QUALITY CONTROL**

*Time : 3 hours*

*Maximum Marks : 70*

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

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1. (a) Explain the procedure to obtain specific gravity of fine aggregate. Discuss the significance of the test. 7
- (b) Describe the procedure to obtain Aggregate Impact Value of aggregate. Explain the utility of the test. 7
2. (a) Explain the procedure to determine the fineness of cement. How does fineness of cement affect other properties of cement ? 7
- (b) Describe the procedure to determine water demand for normal consistency of a cement sample. Explain the significance of the test. 7

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

- (a) Capping of specimen for testing of concrete cylinder.
- (b) Heat of hydration and relevant factors affecting it.
- (c) Importance of grading of aggregates for concrete production.
- (d) Use of normal distribution curve in quality control.

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

- (a) Cube strength and Cylindrical strength of concrete
- (b) Ring tension test and Double punch test
- (c) Characteristic strength and Target mean strength of concrete
- (d) Aggregate crushing value and Aggregate impact value

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

- (a) Wet transverse strength of cement concrete tiles
- (b) Role of admixture in concrete
- (c) Determination of efflorescence in clay building bricks
- (d) Factors affecting workability of concrete

6. Explain briefly the following tests :  $4 \times 3 \frac{1}{2} = 14$
- (a) Pull out test for concrete
  - (b) Impermeability test for AC sheets
  - (c) Boiling water test for plywood
  - (d) Static bending test for timber
7. (a) Describe slump test of concrete. Also discuss the limitations of the test. 7
- (b) Explain flexural strength test for concrete. Discuss the significance of the test. 7
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