

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

**Term-End Examination**

**December, 2012**

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

*Time : 3 hours*

*Maximum Marks : 70*

*Note : Question No. 1 is compulsory. Attempt any four out of balance six questions. The answers shall be in your own language.*

1. Fill in the blanks :

- (a) \_\_\_\_\_ method is used to determine sulphate in water while water having more than 0.08ppm of \_\_\_\_\_ may be avoided for curing. 2
- (b) \_\_\_\_\_ is a measure of dispersion of data while \_\_\_\_\_ is the Positive Square root of the variance of data. 2
- (c) \_\_\_\_\_ and \_\_\_\_\_ principles are used in measuring surface Hardness methods in non-destructive testing. 2
- (d) \_\_\_\_\_ is applicable to Cylindrical Specimen. The ends of test Specimen. Which are not plane within \_\_\_\_\_ mm are Capped. 2

- (e) IS 2386-1963 gives six different tests for knowing mechanical properties of \_\_\_\_ . However the four most common tests used are \_\_\_\_, \_\_\_\_, \_\_\_\_ and \_\_\_\_ . 5
- (f) For determination of modulus of rupture of concrete beams, IS:516 specifies \_\_\_\_\_ loading. 1
2. Explain the factors affecting Compressive Strength of Concrete. What is K-slump tester ? Explain with neat diagram. **6+8=14**
3. What do you understand by non-destructive testing ? Give the classification along with the circumstances under which each one can be used. **5+9=14**
4. Explain the methods for determination of the following : **4x3½=14**
- (a) Compressive Strength of Bricks
  - (b) Workability of concrete mix
  - (c) Efflorescence of Bricks
  - (d) Flakiness Index of Aggregate
5. (a) What do you understand by Soundness ? Explain soundness test on aggregate. **8+6=14**
- (b) Explain Alkali Aggregate Reactivity with the help of mortar bar Expansion test method.

6. What do you understand by bleeding of concrete? Explain the method for test for bleeding of concrete in detail giving apparatus, procedure and method of Calculation.  $3+3+4+4=14$  .
7. Write Short notes on the following.  $4 \times 3\frac{1}{2}=14$
- (a) Magnetic method for Testing Hardened concrete
  - (b) Determination of flexural strength of concrete
  - (c) Standard pull out test
  - (d) Ring tension test
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