

B.Tech. Civil (Construction Management)

Term-End Examination

00443

June, 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) Describe the procedure of testing cylindrical concrete specimen for compressive strength of concrete. 12
- (b) Comment on the cube strength v/s cylinder strength. 2
2. (a) Mention the sizes of the set of sieves as recommended by IS : 2386 for carrying out sieve analysis. What observations and results are reported in this test ? 5
- (b) Differentiate between shear slump and collapse slump. Describe the slump test and its limitations. Give a neat sketch of the experimental set-up. 9

3. (a) Discuss the field tests of cement that are recommended for minor works. 5
- (b) Define the soundness of cement. Describe the 'Le-Chatelier Method' for determining the same and discuss its limitations. 9
4. What all tests do you carry out for the following construction items ? Also determine their suitability. $2 \times 7 = 14$
- (a) Brick
- (b) Timber
5. (a) What are the various tests carried out for checking the quality of water ? Explain any two in detail. 8
- (b) Explain the effect of height/diameter ratio of specimen and rate of loading on the compressive strength of concrete. 6
6. (a) Explain the following tests for concrete : 7
- (i) Ring Tension Test
- (ii) Double Punch Test
- (b) List out any four non-destructive concrete testing methods and explain any one of them. 7

7. Write short notes on the following :

$$4 \times 3 \frac{1}{2} = 14$$

- (a) Vee-Bee Test
 - (b) Testing of AC Sheets
 - (c) Glue-Adhesion Test
 - (d) Capping of Specimen
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