

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)**

**CLASS: BE
BRANCH: CIVIL**

**SEMESTER: VII
SESSION: MO/2018**

SUBJECT: CE8015 CONSTRUCTION ENGINEERING PRACTICES

TIME: 1.5 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 30.
 2. Candidates may attempt for all 30 marks.
 3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. The missing data, if any, may be assumed suitably.
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- Q1 (a) State the step by step manufacturing process of concrete. [2]
(b) Discuss different methods of curing processes in concrete manufacturing. [3]
- Q2 (a) What is compaction? [2]
(b) What are the advantages of using ready mix concrete over the site mix concrete? [3]
- Q3 (a) Why curing is important in the development of concrete strength? [2]
(b) Discuss Auto-claving and its' procedure. [3]
- Q4 (a) Discuss the maturity concept of concrete with an example. [2]
(b) The relation between strength and maturity for a concrete is known to be as follows: [3]
in SI units: $f_c = -33 + 21 \log_{10} M$.
What temperature would be required to reach a strength of 30 MPa at 28 days?
- Q5 (a) Under what conditions hot weather concreting is considered? [2]
(b) What are the precautionary measures you would take in case of hot weather concreting? [3]
- Q6 (a) What are the effects of cold weather on concrete manufacturing process? [2]
(b) Discuss different methodologies considered while concreting in cold weather region. [3]

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