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Roll No .....

**CE-402 (GS)**  
**B.E. IV Semester**  
Examination, November 2019  
**Grading System (GS)**  
**Concrete Technology**  
Time : Three Hours

Maximum Marks : 70

- Note : i) Attempt any five questions.  
ii) All questions carry equal marks.

1. What is meant by ordinary Portland cement 53 grade? What are the chemical composition of Portland cement?
2. State the principal requirements of good aggregate. Explain the significance of grading of a combined aggregate.
3. Write detailed note on the following:
  - a) Binary cement
  - b) Air-entraining cement
4. State the order in which the cement compounds are formed after calcination. Explain the properties of these compounds.
5. What are the methods available for measuring air content of fresh concrete? Explain one of the methods in detail.
6. Write a detail note on:
  - a) Acceptance criteria for concrete
  - b) Design of plastic concrete mix

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7. Write short notes on any four :
  - i) Light weight concrete
  - ii) Polymer concrete
  - iii) Sulphur infiltrated concrete
  - iv) Fibre reinforced concrete
  - v) High density concrete

8. Discuss steps involved in mix proportioning and explain trial and adjustment method of mix design.

OR

What is non-destructive testing of concrete? Discuss any one non-destructive testing method of concrete.

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