

Total No. of Questions :5]

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CE - 402

B.E. IV Semester

Examination, December 2015

Concrete Technology

Time : Three Hours

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Maximum Marks : 70

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each question are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc.

1. a) What is concrete?
b) What is the function of binding material in concrete?
c) State the characteristics of good concrete.
d) Name different types of cement and state their characteristics.

Or

List the principal requirements of good aggregate. Explain the significance of grading of a combined aggregate.

2. a) What do you mean by the term workability?
b) Draw deformation curve for fresh concrete.
c) Define rheological of concrete and discuss Bingham model.
d) Discuss factors affecting rheological properties of concrete in detail.

Or

Write short notes on

- i) Shrinkage and temperature effects
ii) Role of permeability

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3. a) Define target strength of concrete.
b) Give acceptance criteria for concrete.
c) Discuss selection of free water-cement ratio.
d) What are the different methods of proportioning concrete? Why is the trial method of proportioning so widely used when several other methods are available? Discuss the method.

Or

Explain I.S. code method of mix design.

4. a) What is curing? Why it's necessary?
b) Give the effects of improper curing of concrete.
c) What are the favourable conditions to be set up at early hardening periods for the best results?
d) Explain vacuum dewatering as applied to under water concreting.

Or

Explain various non destructive testing methods of concrete.

5. a) Define light weight concrete.
b) What do you understand by ceramics?
c) Explain prestressed concrete.
d) Write short note on:
i) Ferrocement concrete
ii) Heat resistant concrete

Or

Write short note on

- i) Fiber reinforced concrete
ii) Ready mix concrete
