

MVCT/MBCT/MVCP-102

M.E./M.Tech., I Semester

Examination, December 2016

Construction Material

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Time : Three Hours

Maximum Marks : 70

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

1. a) Discuss in detail about the PSC and PPC. Also list the Portland and Non-Portland cements generally used in construction.
b) Discuss in detail about Micro Structure of hydrated cement.
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2. a) What do you mean by corrosion of concrete? Discuss in detail the various factors responsible for the corrosion of concrete.
b) What do you mean by creep of concrete Describe the role of aggregate in creep of concrete?
3. a) What are superplasticizers? State the advantages and disadvantages of superplasticizers.
b) What is meant by structural lightweight concrete? How is it classified?
4. a) Explain what is meant by polymer concrete.
b) Discuss in detail about industrial wastes used in the concrete construction.

5. a) What is meant by Non-Destructive Testing of materials?
What are the uses of the ultrasonic pulse velocity test?
- b) Explain the rebound-hammer non-destructive test to assess the compressive strength of concrete.
6. a) What do you mean by shrinkage of concrete? Discuss the various factors affecting the shrinkage of concrete.
- b) How can drying shrinkage cracking be reduced?
7. a) What do you mean by quality control of concrete? Discuss the factors causing variations in the quality of concrete.
- b) Discuss the characteristics of good aggregates. What are the deleterious substances in aggregates?
8. Write short notes on following :
- a) Fire resistance of Concrete
 - b) Additives
 - c) Ready mixed Concrete
 - d) Destructive Testing of Materials

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