

Roll No

MVSE-203

M.E./M.Tech., II Semester

Examination, December 2016

Advance Concrete Technology

Time : Three Hours

Maximum Marks : 70

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

1. a) Explain hydrated structure of cement with neat sketch. 7
b) Explain the quality control of concrete. 7
2. Explain the rheological behaviour of concrete. What are the factors affecting the rheological behaviour of concrete? Explain any three tests to determine the workability of concrete. 14
3. a) What are the objective of curing of concrete? Explain different methods of curing of concrete. 7
b) Explain briefly ready mix concrete and its properties. 7
4. Discuss special features of cold weather concreting and hot weather concreting, when and where it is required? Discuss the concreting procedure in both cases with example. 14
5. a) Explain various factors affecting shrinkage of concrete. 7
b) Discuss factors influencing permeability of concrete. 7

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6. What are the properties of high density concrete? Explain the method of production and application of high density concrete. 14
7. What is Mix-design? Explain in detail various factors governing the selection of mix proportion. 14
8. Write short notes on : $4 \times 3\frac{1}{2} = 14$
 - a) Non-Destructive Testing
 - b) Efflorescence in concrete
 - c) Creep of concrete
 - d) Light weight concrete
