

Roll No

MVCT/MBCT/MVCP-102**M.E./M.Tech., I Semester**

Examination, December 2015

Construction Material*Time : Three Hours**Maximum Marks : 70*

- Note:** i) Attempt all questions, internal choices are given.
 ii) Any missing data assumed suitably and stated clearly.

Unit - I

1. a) What do you mean by standardization of materials? Describe the necessity and advantages of standardization of materials. 7
- b) Describe the Indian standard codal requirement of, anyone, construction material. 7

OR

2. Describe in details the microstructure of following materials
 - a) Hardened concrete 7
 - b) Mild steel 7

Unit - II

3. a) How thermal changes influences the properties of reinforcing steel used in RCC. 7
- b) What is chemical effect? Describe in details the sulphate attack on hardened concrete. 7

OR

4. What is chloride effect? Describe in details the effect of chloride on concrete and reinforcement of RCC. How the chloride resistance of RCC can improve. 14

Unit - III

5. What are mineral admixtures of concrete? Describe various mineral admixtures in details. How they improve the properties of concrete. Also explain the necessity and limitation of mineral admixtures. 14

OR

6. Write short notes on
 - a) Fibre reinforced concrete 7
 - b) Ready mix concrete 7

Unit - IV

7. How industrial and agricultural waste can be used as building materials. Enumerate such type building materials with their properties. Discuss suitability of these materials. 14

OR

8. Describe the following in details
 - a) Polymer material and Polymer concrete 7
 - b) Ferro cement and Ferro concrete 7

Unit - V

9. a) Describe the various aspect and principles of statistical quality control. 7
- b) Describe the recommendations of Indian standard for quality control of concrete during construction work. 7

OR

10. Describe the following in details
 - a) Non destructive testing of concrete (Minimum two) 7
 - b) Different techniques of quality control 7
