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Reg. No. :

Name :

**Third Semester B.Tech. Degree Examination, April/May 2012
(2008 Scheme)**

Branch : Civil

08.304 : CONCRETE TECHNOLOGY

Time : 3 Hours

Max. Marks : 100

Instruction : Answer **all** questions from Part – **A** and **one** question from **each** Module in Part – **B**.

PART – A

1. What is soundness of cement and how is it tested ?
2. List any five types of cement indicating their use for different applications.
3. What is meant by grade of cement ? Discuss different grades of cement available.
4. Explain bulking of sand and its relevance in construction work.
5. List the various tests conducted on coarse aggregate indicating the property being tested.
6. Define workability of concrete. What are the different factors affecting workability of concrete ?
7. Explain Non-destructive testing of concrete.
8. Explain the importance of grading in mix design. **(8×5=40 Marks)**

PART – B

Module – I

9. a) Describe the chemical compound composition of portland cement and hydration process of these compounds. **15**
b) Write a note on cement storage. **5**

OR

10. Discuss different characteristics of aggregates. **20**

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Module – II

11. a) Explain the role of water– cement ratio in the fresh and hardened properties of concrete. 10
- b) Describe with sketch slump test for determining workability. 10
- OR
12. Discuss the process of manufacture of concrete and different steps involved in concreting . 20

Module – III

13. a) Explain the stress- strain characteristics of concrete. 10
- b) Discuss different factors which affect the strength of concrete. 10
- OR
14. Explain proportioning of concrete mixes. Discuss different factors influencing the choice of mix proportions. 20
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