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**B.Tech. Civil (Construction Management) /
B.Tech. Civil (Water Resources Engineering)**

Term-End Examination

June, 2012

ET-204(B) : ENGINEERING MATERIALS

Time : 3 hours

Maximum Marks : 70

Note : Attempt any five questions.

All questions carry equal marks.

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1. (a) What is the percentage composition of hydration products of cement ? Explain the role of hydration products in improving the compressive strength of cement with curing time. 7
 - (b) What is the difference between quick lime and hydrated lime ? Explain slaking and hardening of lime. 7
 2. (a) How bituminous products are processed ? Write the specifications for industrial bitumen. 7
 - (b) Discuss the role of bitumen in water proofing of buildings. 7

3. (a) Describe in brief the bonding and sealing agents. 7
- (b) What are the advantages of foam and aerated concrete ? Explain how they are manufactured and used ? 7
4. (a) Write a detailed note on epoxy resin flooring. 7
- (b) How super plasticizers are classified ? Discuss the role of superplasticizer in the improvement of quality of concrete. 7
5. (a) Explain the procedure of damp proofing treatment for floors above the ground level. Give a neat sketch also. 7
- (b) Describe following methods of textured concrete finishes- 7
- (i) Exposed Aggregate finishes
- (ii) Mechanical finishes :
6. (a) Explain thermo setting plastics and thermo plastics. Describe fibre reinforced plastics. 7
- (b) Describe the properties and importance of medium density fibre board. 7
7. (a) Explain following light - fittings : 7
- (i) Lamp holders.
- (ii) Miniature Circuit Breaker (MCB).
- (b) Explain the purpose of an ELCB. 7

8. Write short notes on followings.

$4 \times 3\frac{1}{2} = 14$

- (a) Premix system of concrete floor
 - (b) Cutback bitumen
 - (c) Non shrink grouts
 - (d) Cement Curing Compounds.
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