

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

Term-End Examination

June, 2010

ET-204(B) : ENGINEERING MATERIALS

Time : 3 hours

Maximum Marks : 70

Note : Attempt any five questions. All questions carry equal marks.

1. (a) Describe the chemical composition of Ordinary Portland Cement. 7
- (b) Define fibre reinforced concrete and explain its uses. 7

2. (a) Explain important tests which should be carried out to ascertain the suitability of bitumen. 7
- (b) What do you understand by bituminous emulsion? Explain its functioning and uses. 7

3. (a) What do you understand by the term bonding agent? Describe important properties of a sealing agent. 7
- (b) Explain functional requirements of floors. 7

4. (a) What precautions should be taken while making a cement concrete floor topping ? 7
(b) Describe various purposes for which admixtures are used in concrete mixes. 7
5. (a) Explain different types of interlocking concrete block floorings with the help of neat sketches. 7
(b) Discuss advantages of a Medium Density Fibre Board over a Solid Board. 7
6. (a) Explain various methods available for Joining PVC conduits. 7
(b) Describe different parts of a cable and the function of each. 7
7. Write short notes on the following : $4 \times 3\frac{1}{2} = 14$
(a) Slaking and Hardening of Lime
(b) Grades of concrete
(c) Requirements of Bitumen
(d) Purpose of painting
8. Differentiate between the following : $4 \times 3\frac{1}{2} = 14$
(a) Superplasticizers and Plasticizers.
(b) Glass Fibre Reinforced Plastics and Natural Fibre Reinforced Plastics
(c) Inspection elbow and solid elbow
(d) Quick Lime and Fat Lime.