

Santu ka

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- SEPTEMBER, 2016

M.TECH III SEMESTER

COURSE CODE: 11M1WCE332

MAX. MARKS: 15

COURSE NAME: ADVANCES IN CONSTRUCTION MATERIALS

COURSE CREDITS: 03

MAX. TIME: 1 HR

Note: All questions are compulsory. Draw figures and sketches to illustrate your answers. Assume missing data suitably if required. Carrying of mobile phone during examinations will be treated as case of unfair means.

1. Explain the influence of w/c ratio and curing on durability of concrete? [2]
2. Why is the C₃A content in cement of interest? [2]
3. Compare the contributions of C₃S and C₂S to the strength of concrete on different ages. [2]
4. How does sulphate in groundwater affect the concrete and explain why magnesium sulphate has a more damaging effect than other sulphates? [2]
5. Derive the expression to demonstrate that porosity depends upon the water/cement ratio and on the degree of hydration. [5]
6. Discuss the influence of fly ash to the properties of freshly mixed concrete and hardened concrete? [2]