

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-1 EXAMINATION- FEBRUARY -2018

B.Tech IV Semester

COURSE CODE: 11B11CE411

MAX. MARKS: 15

COURSE NAME: CONCRETE TECHNOLOGY

COURSE CREDITS: 04

MAX. TIME: 1 HRS

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

1. What is the difference between strength and toughness? Why 28 days of compressive strength is generally specified.
2. How many types of voids are present in hydrated cement paste? What are their typical dimensions? Discuss the significance of CSH interlayer space with respect to the hydrated cement paste.
3. What would be the volume of capillary voids in a 0.2 water cement ratio paste that is only 50 percent hydrated?
4. Why is C_3S is more reactive and YC_2S nonreactive with water at normal temperature? MgO and CaO have similar crystal structures, but their reactivities are very different from each other. Explain why.
5. Discuss the hydration of cement in detail.