

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-2 EXAMINATION- APRIL -2018

B.Tech IV Semester

COURSE CODE: 11B11CE411

MAX. MARKS: 25

COURSE NAME: CONCRETE TECHNOLOGY

COURSE CREDITS: 04

MAX. TIME: 1.5 HRS

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

CO1 Identify Hydration mechanism and testing of concrete making materials.

CO2 Understand the behavior of fresh and hardened concrete

CO3 Understand the influence of chemical and mineral admixture.

CO4 Understand the mix design and durability requirements of concrete

CO5 Understand the need for special concretes

1. List any three characteristics of concrete aggregates and discuss their influence on both the properties of fresh and hardened concrete. (3) (CO1,CO2)
2. Some manufacturers claim that application of water reducing admixture can lower the cement content and increase the consistency and strength of a reference concrete mixture. Explain why all three benefits may not be available at the same time. (5) (CO2, CO3)
3. As an accelerator why sodium chloride is not as effective as calcium chloride. (2) (CO1, CO3).
4. Explain the mechanism by which mineral admixtures are able to improve the pumpability and finishability of concrete mixtures. In the amounts normally used some are water reducing and whereas others are not. Discuss with the help of examples. (5) (CO2, CO3)
5. Explain all the tests of cement in detail. (5) (CO1)
6. Discuss the fresh and hardened tests for concrete in detail. Explain the different mechanism of action of superplasticizers. (5) (CO2,CO3)