

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- December 2017

B.Tech (VII)

COURSE CODE: 10B13CE744

MAX. MARKS: 35

COURSE NAME: Advanced Concrete Technology

COURSE CREDITS: 03

MAX. TIME: 2 Hrs

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

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1. Compare the technologies of producing latex modified and polymer impregnated concretes. Also compare the typical mechanical properties and durability characteristics of the two concrete types.
2. Discuss why the use of water reducing and pozzolanic admixtures is necessary to produce ultra high strength concrete.
3. Explain the advanced mix design procedure to produce ultra high strength concrete (compressive strength more than 130 MPa). Explain the advanced concepts of particle packing concepts used for advanced mix design.
4. Define static and dynamic modulus of concrete. Explain how static and dynamic moduli of concrete are measured.
5. What do you understand by self compacting concrete? Explain the different tests performed for self compacting concrete for specific properties measured.
6. Describe the advantages and disadvantages of construction practices for controlling the temperature rise in concrete.
7. What do you understand by dynamic increase factor? Briefly describe the working principle of split Hopkinson pressure bar with a labeled diagram.