

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -I EXAMINATION, 2016

M.TECH IV SEMESTER

COURSE CODE: 10M13CE432

MAX. MARKS: 15

COURSE NAME: CONSTRUCTION METHODS IMPROVEMENT

COURSE CREDITS: 03

MAX. TIME: 1 HR

Note: All questions are compulsory. Draw figure, sketches and give suitable example 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 importance of mixing time in concrete production? 2
2. Briefly describe different methods of underwater concreting? 4
3. Compare slip form and tunnel form techniques? 3
4. Explain with diagram, the relationship between shear strength and the normal stress of fresh concrete before, during and after vibration. 2
5. Explain what is understood by 'saturated state' in the context of pump-able concrete? What is the maximum pumping distance for a saturated concrete if the initial pressure at the pump end is 35 kg/cm^2 , diameter of the pipe is 150 mm and flow resistance per unit area of the pipe is $3.5 \times 10^{-3} \text{ kg/cm}^2$? 4