

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2024

Ph.D

COURSE CODE (CREDITS): 11M1WCE332(3)

MAX. MARKS: 35

COURSE NAME: ADVANCES IN CONSTRUCTION MATERIALS

COURSE INSTRUCTORS: Dr. Saurav

MAX. TIME: 2 Hrs

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q1. Discuss in details about air entraining admixture. What are the factors affecting amount of air entrainment? Also discuss the effect of air entrainment on the properties of Concrete. [7, CO1]

Q2. What do you mean by pozzolonic action in cement hydration? Discuss in details about fly ash, its physical and chemical properties. Discuss characteristics of High Volume fly ash Concrete. [7, CO2]

Q3. Discuss in details on chemicals for waterproofing. Explain the process involved in the application of chemical DPC in old buildings. [7, CO3]

Q4. What do you mean by Workability of concrete? Discuss various factors that affect workability of concrete. Discuss in details any one test to measure the workability of fresh concrete. [7, CO4]

Q5. Discuss the working action of plasticizers in concrete. Enumerate various types of super plasticizers. What do you mean by compatibility of super plastizers [7, CO4]