

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2024

Ph.D

COURSE CODE(CREDITS): 11M1WCE332(3)

MAX. MARKS: 25

COURSE NAME: ADVANCES IN CONSTRUCTION MATERIALS

COURSE INSTRUCTORS: Dr. Saurav

MAX. TIME: 1 Hour 30 Minutes

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. How fly ash blended cement is useful and effective ingredient in construction industries? Discuss in details about pozzolonic action involved. [5, CO2]

Q2. Discuss classification of fly ash as per ASTM. Discuss the effect of fly ash on fresh concrete taking into consideration the heat of hydration evolved. [5, CO2]

Q3. Discuss the effect of silica fume when used as partial replacement of cement. Tabulate physical requirement as per IS 15388:2003. [5, CO3]

Q4. Discuss the effect of Ground granulated blast furnace slag (GGBS) in fresh concrete and hardened concrete. Discuss using graphical interpretation in terms of strength and heat of hydration [5, CO3]

Q5. Explain in details different damp proofers used in construction industries. Explain why cement can also be used as dam proofers [5, CO3]