

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- 2023

B.Tech-III Semester (CE)

COURSE CODE (CREDITS): 18B11CE313 (3)

MAX. MARKS: 25

COURSE NAME: BUILDING MATERIALS AND CONSTRUCTION

COURSE INSTRUCTORS: AKASH BHARDWAJ

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. (a) Draw the neat and clean figure of door frame mentioning its various components. (3 marks) [CO 3]
- (b) How does the depth of the water table influence foundation design and construction on black cotton soil? Explain which type of foundation should be preferred in this case. (3 marks) [CO 2]
- Q2. (a) Explain Quarrying. What are the primary methods of quarrying building stones, and how do they differ in terms of technique and equipment? (3 marks) [CO 1]
- (b) What are the primary objectives of stone dressing, and how do they vary depending on the intended use of the stone? (2 marks) [CO 1]
- Q3. (a) What are the primary purpose/objectives of soil exploration and site investigation in civil engineering and construction projects? (2 marks) [CO 1,2]
- (b) What are the different geophysical methods used to assess subsurface conditions and soil properties? Explain any one. (3 marks) [CO 2]
- Q4. (a) What are the standard dimensions of a brick (with and without mortar)? Draw rowlock and sailor orientation of brick. (3 marks) [CO 2,3]
- (b) Explain efflorescence in bricks, and what causes it to occur? (2 marks) [CO 2]
- Q5. (a) Define Perpend in brick masonry. (1 mark)
- (b) Define Raking back in brick masonry with figure. (1 mark)
- (c) Explain English bond in brick masonry with help of figure. (2 marks) [CO 1,2]

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