

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS-2022

B.Tech-VII Semester (Civil)

COURSE CODE (CREDITS): 18B1WCE735(3)

MAX. MARKS: 25

COURSE NAME: DAM AND RESERVOIR DESIGN

COURSE INSTRUCTOR: NIRAJ SINGH PARIHAR

MAX. TIME: 1 Hour 30 Minutes

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*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

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1. Briefly discuss about the major storage zones and levels in a reservoir with the help of a labelled diagram. [5] (CO3)
2. A masonry dam 6 m high is 1.5 m wide at the top and 4.5 m at the base with vertical water face, no drainage gallery and water level up to the top of dam. Neglecting the seismic and tail water effects analyze the dam for its stability and find the major stresses. Assume suitable data wherever required. Show proper calculations with pressure diagrams. [10] (CO4, CO5)
3. Derive the expressions for pressure at the base, major principal stress and shear stress near the toe for elementary shape of the dam in full reservoir condition. [5] (CO4)
4. Explain the following in brief: [2+3] (CO2)
  - a. Shear keys
  - b. Types of joints in dams