

B.Tech. CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

00323

June, 2018

**BICEE-019 : EARTH AND ROCKFILL DAM
ENGINEERING**

Time : 3 hours

Maximum Marks : 70

Note : *Attempt any **five** questions. Assume missing data suitably. Use of scientific calculator is permitted.*

1. (a) Discuss the single jack test of the rock. 7
(b) Describe the types of Earth dams. 7
2. Elaborate the types of foundations and methods of treatment of foundation for Earth dams. 14
3. Describe the Brazilian test of rocks with neat sketches. 14
4. Write the steps of design of Rockfill dams. 14
5. (a) Discuss the construction materials to make an embankment. 7
(b) Discuss the wedge method (sliding block) for stability analysis of a dam. 7

6. Write short notes on any **four** of the following : 14

- (a) Copper Dam
- (b) Soft Clay and Silt
- (c) Laplace's Equation
- (d) Khosla's Theory
- (e) Functions of Reservoir
- (f) Rockfill Dams

7. Figure 1 shows the section of a gravity dam (non-overflow portion) built of concrete. Calculate, (neglecting earthquake effects) the maximum vertical stresses at the heel and toe of the dam. 14

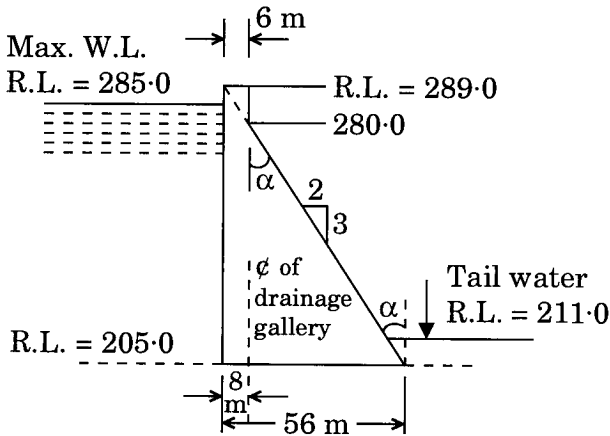


Figure 1