

B.Tech. CIVIL ENGINEERING (BTCLEVI)**Term-End Examination****December, 2015****BICEE-019 : EARTH AND ROCK FILL DAM
ENGINEERING***Time : 3 hours**Maximum Marks : 70*

Note : Answer any *seven* questions. All questions carry equal marks. Use of scientific calculator is permitted.

1. Describe the different types of earth and rock fill dams. What are the basic design considerations of earth and rock fill dams ? 10
2. Discuss the various methods of sub-surface exploration for foundation of earth and rock fill dam. 10
3. Briefly describe the design of internal drainage system for an earth dam. 10
4. Describe the design of foundation for an earth dam on loose sand. 10

5. Discuss the measurement and control of embankment movements during construction. 10
6. Describe the general features and construction details of hydraulic fill dams. 10
7. Discuss the permeability test for soil, giving two methods. 10
8. Describe the wedge method of stability analysis of a dam. 10
9. Explain the Punch Shear test and Shear Box test. 10
10. Write short notes on the following : $4 \times 2 \frac{1}{2} = 10$
- (a) Downstream Slope Protection
 - (b) Cofferdam Construction
 - (c) Flownet Phreatic Line on Earth Dam
 - (d) Soil Compaction
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