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BICEE-019

B.Tech. CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

June, 2015 00886

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. Discuss the general features of an Earth dam and also give classification of the different types of Earth dams. *10*

2. Describe the influence of topography and sub-soil conditions on site selection for dams. *10*

3. Briefly describe the design procedure for the embankment of an Earth dam. *10*

4. Discuss the technique adopted for controlling the seepage from Earth dams. *10*

5. What are the various phases in Earth dam construction ? Discuss in detail. *10*

6. With the help of a neat sketch, discuss the various components and design of a Rockfill dam. *10*

7. Discuss the Leo-Casagrande solution in analysis for Earth and Rockfill dams. *10*

8. Discuss the Taylor's modified Swedish method for stability analysis of a dam. *10*

9. Describe the procedure of determination of Young's Modulus by bending test and Brazilian test. *10*

10. Write short notes on the following : $4 \times 2\frac{1}{2} = 10$

(a) River Diversion

(b) Upstream Wave Slope Protection

(c) Slope Treatment and Riprap

(d) Piping and Exit Gradient