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BICEE-019

B.TECH. CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

June, 2013

BICEE-019 : EARTH AND ROCK FILL DAM ENGINEERING

Time : 3 hours *Maximum Marks : 70*

*Note : Attempt **any seven** questions and each question carries **equal** marks.*

1. (a) Explain with neat sketch the general features of earth and rockfill dams in brief. 5
   (b) Write the advantages and disadvantages of earth and rockfill dams. 5

2. Briefly describe the influence of topography and sub - soil conditions on site selection of earth and rockfill dams. 10

3. (a) Briefly describe the methods of foundation treatment in rock fill dams. 5
   (b) What are the design considerations for earth dams in earthquake regions ? Explain briefly. 5

4. What are various methods for upstream slope wave protection and downstream slope protection in Earth dams ? Explain with suitable sketches. 10

5. (a) Describe the methods of river diversion and cofferdam construction with neat sketch. 5

(b) Discuss the various methods for slope treatment in earth dam with neat sketch. 5

6. Illustrate with neat sketch and describe briefly the various components of rockfill dam. 10

7. (a) Briefly describe the various pore pressure measuring equipment in embankments. 5

(b) Discuss in brief the various movements of embankment during : 5

(i) Construction

(ii) Post - construction with neat sketches.

8. Briefly describe Casagrande's solution for analysis of earth and rockfill dams. 10

9. Briefly explain Schwarz Christoffel transformation in the analysis of earth and rockfill dams. 10

10. Discuss Taylors Modified Swedish method for stability analysis of earth and rockfill dams. 10