

B.Tech. CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

00302

December, 2017

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

Time : 3 hours

Maximum Marks : 70

*Note : Attempt any **five** questions. All questions carry equal marks. Assume suitable missing data, if any. Use of scientific calculator is permitted.*

1. (a) With the help of neat sketches, describe the general features of earth and rockfill dams, in brief. 7
- (b) Discuss the advantages and disadvantages of earth and rockfill dams. 7

2. Discuss various methods of sub-surface exploration for the foundation of an earth and rockfill dam. 14

3. Discuss various causes of failure of earth dams. How would you prevent different types of failures? 14
4. Describe the procedure for checking stability of upstream slope of an earth dam under sudden-drawdown condition. 14
5. (a) What are the design considerations for a rockfill dam? Discuss in brief. 7
- (b) What are the various considerations for design of earth dams in seismic regions? 7
6. Describe the procedure of determination of Young's modulus by bending test and Brazilian test. 14
7. Write short notes on any *four* of the following : $4 \times 3 \frac{1}{2} = 14$
- (a) River Diversion
- (b) Slope Treatment and Riprap
- (c) Soil Compaction
- (d) Chimney Drain
- (e) Seepage Control Through Foundation