

Roll No.

Total No. of Pages : 01

Total No. of Questions : 08

**M.Tech.(Geo Technical Engineering)**  
**M.Tech.(Soil Mechanics & foundation Engineering)(2013 Batch)**  
**(Sem.-2)**

**EARTHEN EMBANKMENT**

**Subject Code : CESE-18**

**Paper ID : [E1009]**

**Time : 3 Hrs.**

**Max. Marks : 100**

**INSTRUCTION TO CANDIDATES :**

- 1. Attempt any FIVE questions out of EIGHT questions.**
- 2. Each question carries TWENTY marks.**

- Q.1 Explain in detail the geological investigation for selection of dam site. (20)
- Q.2 a) Write in detail the general features of earth and rock fill dam. (10)  
b) Discuss causes of failure of earthen dam. (10)
- Q.3 Enlist the tests of foundation materials. Describe in detail the tests for shear considerations. (20)
- Q.4 a) Explain method to draw seepage line through homogenous earth dam. (12)  
b) Distinguish between Elementary profile and practical profile of a dam. (8)
- Q.5 a) Discuss causes of hydraulic seepage. What are the remedial measures for it? (10)  
b) State Darcy's Law. Also write the applications of it. (10)
- Q.6 Write notes on following :
- a) Soil unsuitable for dam construction. (10)  
b) Theory of flow nets. (10)
- Q.7 Draw a typical cross section of an earthen dam and name various components and terms, involved in it. (20)
- Q.8 Write short notes on following :
- a) Exit gradient. (5)  
b) Settlement tests. (5)  
c) Flow through saturated porous media. (10)