

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

[2]

http://www.a2zsubjects.com

Roll No.....

MVCT/MBCT/MVCP-103**M.E./M.Tech. I Semester**

Examination, December 2017

Advanced Geotechnical Engineering**Time : Three Hours****Maximum Marks : 70**

- Note:** i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) What are the various boring methods of soil exploration?
Explain any one method in detail. 7
b) Explain the Steinbrenner's method of stress determination under loaded ground. 7
2. a) Explain any one geophysical method of subsoil exploration. 7
b) Discuss the design criteria for design of cutting edge, bottom plug, well cap and top plug in well foundation. 7
3. Sketch various types of cofferdams. Also discuss safety against sliding and safety against overturning in design of Cellular Cofferdam with TVA method. 14
4. a) What are the criteria as per IS Code for design of foundation for impact type of machine? 7
b) Explain the following. 7
i) Mass spring model
ii) Types of vibrations

5. a) Explain suitability of various types of machine foundation by drawing their neat sketches. 7
b) Differentiate between expansive and collapsible soil. How these are recognized in the field? 7
6. Describe various methods of construction in expansive soils. 14
7. a) Define Rock Mechanics and discuss importance of knowledge of this subject in civil engineering. 7
b) Describe various mechanical properties of rocks. 7
8. Write short notes on any four of the following. 14
a) Bore log
b) Contact pressure distribution
c) Interlock stresses
d) Tilts and shifts
e) Apparent mass of soil
f) Classification of rocks
g) Point load test of rock

101