

Roll No. _____

MVCT/MBCT/MVCP-103

M.E./M.Tech., I Semester

Examination, November 2018

Advanced Geotechnical Engineering

Time : Three Hours

Maximum Marks : 70

- Note :** i) Attempt any five questions.
ii) All questions carry equal marks.
iii) Assume missing data, suitably.

1. Explain various methods of Geophysical exploration along with their limitations. 14
2. Derive an expression for vertical stresses due to concentrated loading using Boussinesq method. 14
3. Define caisson and explain its types. Draw a neat sketch of an open caisson and label all its components. 14
4. a) Explain about Newmarks influence chart and write its uses. 7
b) Discuss various design steps of cellular coffer dam on rock. 7
5. a) Discuss provisions of IS code for the design of foundation of the Reciprocating machines. 7
b) Discuss the use of single degree freedom system in the analysis of Machine foundation. 7

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6. a) Explain about under reamed piles. 7
b) Explain about CNS layer techniques. 7
7. a) Explain about classifications of rocks. 7
b) Explain about various properties of rocks. 7
8. Write short notes on following.
 - a) Damped vibrations 4
 - b) Undamped vibrations 4
 - c) Cofferdam 2
 - d) Mass spring model of analysis 4
