

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

SECTION-B

- Q2. Discuss the stability analysis of wells in cohesionless soils.
- Q3. Discuss pile load tests in detail.
- Q4. Explain with neat sketches various types of machine foundations.
- Q5. What are the various methods of boring? Discuss.
- Q6. Proportion a square footing to carry a load of 150t from a column. The depth of foundation is to be kept at 2m below ground surface. Maximum permissible settlement of the footing is 40mm and a factor of safety of 3 is required against shear failure. The subsoil is sand with an average corrected N value of 18 as established from borings. Water table is at a large depth. Use teng's correlations.

SECTION-C

- Q7. Discuss various Geophysical methods of soil exploration in detail.
- Q8. A 300mm diameter concrete pile, 10m long, was driven by a McKiernan and Terry double acting hammer (rated energy 16.62 kJ, total mass 2200kg). The driving was done with a short dolly and cushion 2.50m. The average penetration recorded in the last five blows was 3.0mm/blow. Calculate the safe pile load.
- Q9. What are the various methods used for in situ determination of dynamic properties of soil?