

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
THIRD SEMESTER M. TECH DEGREE EXAMINATION

Civil Engineering

(Geomechanics and Structures)

04 CE 7303— Marine Geotechnical Engineering

Max. Marks: 60

Duration: 3 Hours

PART A

Answer All Questions

Each question carries 3 marks

1. What are the post-depositional changes in marine soils?
2. Write a short note on pressure meter test.
3. Comment on the settlement of soil beneath gravity structures.
4. What are the geotechnical problems related to jack-up platforms?
5. What are the different types of bored type of offshore piles?
6. Prior to foundation pile installation, what are the temporary support systems provided for jacket type structures?
7. What are the primary objectives in designing a submarine pipeline system?
8. Write a short note on the final design and installation of a submarine pipeline system.

PART B

Each question carries 6 marks

9. Write a note on the engineering behavior of marine soils under cyclic loading.
OR
10. Explain the structure of marine sediments.
11. What are the different laboratory testing methods used in offshore site investigation?
OR
12. Explain the tests used in the in-situ determination of strength of submarine soils.
13. Write a short note on stability computation of gravity structures.
OR
14. Comment on soil reconnaissance for the installation of gravity structures.
15. Write a note on the stability computation of jack-ups.
OR
16. Explain about the different types of support for jack-up platforms?
17. Explain the Reese-Matlock method for the analysis of jacket type structures.
OR

18. Explain about the analysis of lateral load capacity of offshore piles.

19. What are the types and functions of seabed anchors?

OR

20. Write a note on the load capacity of anchors.