

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SECOND SEMESTER M.TECH DEGREE EXAMINATION (R,S), MAY 2024**GEOMECHANICS AND STRUCTURES****(2021 Scheme)****Course Code: 21GS205-B****Course Name: Marine Geotechnical Engineering****Max. Marks: 60****Duration: 3 Hours****PART A*****(Answer all questions. Each question carries 3 marks)***

1. Classify marine sediments according to size.
2. Explain pressure meter test with a neat sketch.
3. Enumerate and explain any two preventive measures for scour effect.
4. Describe spud can.
5. Enlist the types of bored piles?
6. Enumerate the temporary supports used for piled structures?
7. Describe offshore anchors.
8. Enumerate the primary objectives in designing a pipeline system?

PART B***(Answer one full question from each module, each question carries 6 marks)*****MODULE I**

9. Differentiate the structure of marine sediments and non-salt water sediments. (6)

OR

10. Explain properties of marine sediments. (6)

MODULE II

11. Explain the steps involved in the complete site characterization of soil? (6)

OR

12. Illustrate the geophysical methods used in offshore site investigation. (6)

MODULE III

13. Elucidate on the construction, installation and instrumentation used in gravity structures. (6)

OR

14. Explain the possible failure mechanics in a gravity structure? (6)

MODULE IV

15. Differentiate between two types of jack up platforms used in offshore works. (6)

OR

16. Elucidate the geotechnical problems faced by jack up platforms? (6)

MODULE V

17. Enumerate and describe the types of offshore piles? (6)

OR

18. Describe p-y curve method? (6)

MODULE VI

19. Explain the design considerations involved in a seabed anchor? (6)

OR

20. Enumerate and describe the types and functions of seabed anchors? (6)
