Register No.:   ....   Name: ....

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SECOND SEMESTER M.TECH. DEGREE EXAMINATION (Regular), MAY 2023
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.   List the post-depositional changes in marine soils?

2.   Explain the reasons for having a good onboard laboratory testing setup?

3.   Enlist the types of gravity structures?

4.   Illustrate the evolution in the shape of spud cans.

5.   Explain the design consideration of temporary support of piled structures.

6.   Describe the types of offshore piles?

7.   Describe the types of seabed anchors?

8.   Describe a pipeline system.

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

MODULE I

9.   Classify marine sediments according to origin.   (6)

OR

10.   Explain about the structure of marine sediments.   (6)

MODULE II

11.   Explain the sampling techniques used in offshore soil investigation.   (6)

OR

12.   Describe the planning and site investigation of marine projects.   (6)

MODULE III

13.   Describe the types of instrumentation used in gravity structures?   (6)

OR

14. Explain the steps involved in the installation of gravity structures? (6)

MODULE IV

15. Describe jack up platform and illustrate how it is installed? (6)

OR

16. Elucidate the stability computation in jack up platforms done? (6)

MODULE V

17. Explain Reese-Matlock method. (6)

OR

18. Explain the geotechnical problems related to jacket platforms? (6)

MODULE VI

19. Describe the key components involved in designing a pipeline system? (6)

OR

20. Summarize the load capacity of anchors. (6)

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