

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

FIRST SEMESTER M.TECH DEGREE EXAMINATION (Regular), DECEMBER 2023**STRUCTURAL ENGINEERING AND CONSTRUCTION MANAGEMENT****(2021 Scheme)****Course Code: 21SC104-D****Course Name: Modern Construction Materials, Methods and Equipment****Max. Marks: 60****Duration: 3 Hours****PART A*****(Answer all questions. Each question carries 3 marks)***

1. Illustrate the different treatments given to fabric used in construction.
2. Write a short note on photocatalytic cement.
3. Discuss the stages of diaphragm wall construction.
4. Describe the procedure for erecting light weight components on tall structures.
5. Explain 3D volumetric construction.
6. Discuss modular coordination.
7. Describe the classification of trucks based on the method of dumping the load.
8. Explain finishing equipments used in construction.

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

9. Explain the various heat treatment methods given to steel. (6)

OR

10. Describe the procedure of water jet cutting. (6)

MODULE II

11. What is the concept of smart materials and explain any two types of smart materials. (6)

OR

12. Illustrate the mechanical behavior of polymers. (6)

MODULE III

13. Illustrate the different construction techniques used in tunneling. (6)

OR

14. Define grouting and explain the various methods. (6)

MODULE IV

15. Write a short note on concrete paving methods. (6)

OR

16. Discuss on slip form techniques. (6)

MODULE V

17. Explain the concept of prefabrication in construction industry. (6)

OR

18. Enumerate the reasons to choose modular construction over conventional construction practices. (6)

MODULE VI

19. Compare the various pile driving equipments. (6)

OR

20. Discuss the various dredging machineries. (6)
