

Reg. No.

**MANIPAL INSTITUTE OF TECHNOLOGY****MANIPAL***(A constituent unit of MAHE, Manipal)***I SEMESTER M.TECH. (Construction Engineering & Management)****END SEMESTER EXAMINATION FEBRUARY-MARCH 2021****SUBJECT: CONSTRUCTION METHODS AND EQUIPMENT
[CIE 5156]**

Date of Exam: 26.02.2021

Time of Exam: 2:00 PM - 5:00 PM

Max. Marks: 50

Instructions to Candidates:

❖ Answer ALL the questions & missing data may be suitably assumed

1A.	Discuss the disadvantages of Thermo concrete and give a comparison with respect to traditional buildings	(04)	CO4
1B.	Discuss the operation, advantages and disadvantages of following equipment i) Mobile Tower Crane ii) Derrick Crane	(06)	CO1
2A.	Explain the process of planning the construction equipment. Discuss the factors to be addressed in planning.	(04)	CO2
2B.	Explain the concept of pre-stressing. Discuss the advantages and challenges in Pre-stressing Technology in India.	(06)	CO3
3A.	Explain the process of repair of super structure cracks in offshore structures.	(04)	CO3
3B.	Compare the following Equipment with respect to its suitability of application i) Ready mix concrete Vs. Site mix concrete ii) Drum type Vs Batch type bitumen mix plant	(06)	CO1
4A.	Discuss the application of Augmented reality with respect to following: i) Quality control in construction. ii) Construction Safety	(04)	CO3
4B.	Explain various hydraulic modes of disposal of dredged soil.	(06)	CO4
5A.	Write a short note on various types of vibrators and mention its specific application.	(04)	CO2
5B.	For a Residential apartment of 12 floors with 10 flats in each floor, the contractor is searching for a suitable formwork type. The firm can afford only one set of formwork. In this case what is your choice? Justify your answer. Also discuss on the problems that are expected during construction because of your choice.	(06)	CO2