

**GUJARAT TECHNOLOGICAL UNIVERSITY****ME – SEMESTER –I-(New) EXAMINATION – SUMMER 2019****Subject Code: 3711409****Date: 09/05/2019****Subject Name: Advanced Construction Techniques****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Write your own view as a Project Manager of Organization about Automation for the fast and qualitative construction. **07**
- (b) Discuss the fundamentals of modular Co-ordination & justify how it will be beneficial to the construction industry. **07**
- Q.2** (a) Define caisson sickness and give the symptoms and suggestive measures for the same. **07**
- (b) Explain operational sequences for tunnel. **07**
- OR**
- (b) Enlist types of Automation. Explain any one in detail with example. **07**
- Q.3** (a) Explain various terms with respect to mud jacking: Cost, Cleanliness, Aesthetics, speed. **07**
- (b) Briefly describe Erection Technology (operation) in the prefabricated housing project. **07**
- OR**
- Q.3** (a) Explain in detail pre stressed concreting and its advantages. **07**
- (b) What is Underpinning? Why it is carried out? **07**
- Q.4** (a) Enlist types of scaffolding and explain any one in detail. **07**
- (b) Sketch typical slip form system. State functions of each component of slip formwork system. **07**
- OR**
- Q.4** (a) Write Safety Precautions for Demolition and Dismantling Work. **07**
- (b) Explain Freezing/Thermal technique in detail with sketch. **07**
- Q.5** (a) Explain construction of tower crane runway with sketches. **07**
- (b) Discuss recommendation for the design of a pre-cast concrete connection. **07**
- OR**
- Q.5** (a) Explain different types of structure in jacking and explain pipe jacking with figure. **07**
- (b) What is cooling tower? Explain its significance and construction sequence. **07**

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