

GUJARAT TECHNOLOGICAL UNIVERSITY**ME – SEMESTER – I (New)– EXAMINATION – WINTER-2019****Subject Code: 3711409****Date: 03-01-2020****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)** How advance construction techniques can be beneficial to construction industry. Write your views with proper justification. **07**
- (b)** Explain the methods used for under water construction. **07**
- Q.2 (a)** Write construction sequence of cable stayed bridge. What are the special cares required while its construction. **07**
- (b)** Explain the different factors are affecting while selection of formwork for bridge construction. **07**
- OR**
- (b)** Enlist types of scaffolding. Explain its types in details. **07**
- Q.3 (a)** Write the basic requirement on construction site for storage of precast elements. **07**
- (b)** What is Underpinning? Write the construction situations in which it is desirable. **07**
- OR**
- Q.3 (a)** Write short note on Trenchless Technology. **07**
- (b)** What are the factors which involves in selection of route for tunnels? **07**
- Q.4 (a)** Explain safety precautions for demolition and dismantling work. **07**
- (b)** Explain suitable erection method for construction of refineries. **07**
- OR**
- Q.4 (a)** Enlist different dewatering techniques and explain any two in details. **07**
- (b)** Explain (1) Box Jacking (2) Pneumatic caisson **07**
- Q.5 (a)** What is Modular coordination? Discuss practical benefits of modular coordination. **07**
- (b)** How retrofitting and strengthening of various R.C.C Structures is being carried out? **07**
- OR**
- Q.5 (a)** Write advantages & disadvantages of Automation with suitable practical examples. **07**
- (b)** Explain construction sequence of Lattice tower. What are the possible problems occur during its construction. **07**