

**GUJARAT TECHNOLOGICAL UNIVERSITY****M. E. - SEMESTER – I • EXAMINATION – WINTER • 2013****Subject code: 714902****Date: 26-12-2013****Subject Name: Advanced Construction Techniques****Time: 10.30 am – 01.00 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 Aims and Objectives of Modular Coordination **07**  
(b) Write down the Advantages of Modular Coordination and explain how it is Beneficial to the Construction Industry? **07**
- Q.2** (a) What are the Methods for Under Water Construction? And give explanation for each method. **07**  
(b) What are the Factors which involves in Selection of Route for Tunnels. **07**
- OR**
- (b) Explain the Following Terms **07**  
1. Box Jacking  
2. Pipe jacking
- Q.3** (a) Enlist and Explain various Bonded Overlay systems for various pavements. **07**  
(b) Explain procedure for vacuum dewatering concrete flooring. **07**
- OR**
- Q.3** (a) Write construction sequences for various projects and its design consideration (Any Two) **07**  
1. Cooling towers  
2. Silos  
3. Chimney  
(b) Explain various problems occur during the continuous concreting operation. **07**
- Q.4** (a) Explain the Essential of Repair for the Civil Structure. **07**  
(b) Write Safety Precautions for Demolition and Dismantling Work. **07**
- OR**
- Q.4** (a) What is Underpinning? Why it is carried out? **07**  
(b) Short Note: Sub Grade Water Proofing **07**
- Q.5** (a) Explain: (Any Two) **07**  
1. Open dewatering system  
2. Sumps and ditches system  
3. Multi well point system  
(b) Explain various Grouting Procedure and its Advantages. **07**
- OR**
- Q.5** (a) Explain Techniques for Pile Testing. **07**  
(b) Explain the procedure for Mud Jacking with its sketch. **07**

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