

GUJARAT TECHNOLOGICAL UNIVERSITY**M.E Sem-I Regular Examination January / February 2011****Subject code: 711402N****Subject Name: Construction Techniques****Date: 01 /02 /2011****Time: 02.30 pm – 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) Explain slurry trench method for dewatering system. **07**
(b) Discuss essential requirements for good Form Work. **07**

- Q.2** (a) Sketch typical slip-form system. State functions of each component of slip-form system. **07**
(b) What are the different methods of tunneling in Hard Rock? Explain any one method with its advantages. **07**

OR

- (b) What is Plate Load Test? Where it is used? Explain the procedure with its limitations. **07**

- Q.3** (a) Describe planning procedure of enabling structure with suitable example. **07**
(b) Discuss with sketches compaction of massive concrete structures. **07**

OR

- Q.3** (a) Describe construction & operation sequence of climbing scaffolding system with sketches. **07**
(b) Explain Rib Loc technology to rehabilitation of existing sewer lines. Discuss briefly various methods for installation of Rib Loc profile to suit various applications of sewer lines. **07**

- Q.4** (a) State aims & objectives of modular co-ordination & also discuss practical benefits of modular co-ordination. **07**
(b) Briefly describe erection technology (operation) in prefab housing project. **07**

OR

- Q.4** (a) Enlist principles of modular co-ordination. Why the concept of tolerance is introduced as one of the principle of modular co-ordination. **07**
(b) Discuss various safety precautions to be observed in handling of pre-cast elements. **07**

- Q.5** (a) Discuss benefits of nano technology in construction **07**
(b) Discuss advantages of ready mixed concrete. **07**

OR

- Q.5** (a) Explain self compacted concrete (SCC). State various tests with sketches. State field problems of SCC. **07**
(b) Give concept of vacuum dewatering system for concrete. Describe operational sequence. **07**
