

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – SUMMER 2013****Subject Code: 160601****Date: 24-05-2013****Subject Name: Advanced Construction Technology****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) Classify and explain with sketches various types of piles based on function. **07**
(b) Enlist various methods of demolition. Explain any two method of demolition. **07**

- Q.2** (a) Define coffer dam. Enlist and explain factors that affect the types of coffer dam. **07**
(b) Discuss points to be considered for planning of earthquake resistant construction. **07**

OR

- (b) Enlist and explain general principles of construction of earthquake resistant buildings. **07**
- Q.3** (a) Differentiate between cased cast in situ piles and uncased cast in situ piles. **07**
(b) Discuss various measures to reduce leakage through coffer dam. **07**

OR

- Q.3** (a) Explain under reamed pile. Describe with sketches construction of under reamed piles. **07**
(b) Enlist different types of coffer dam. Describe with sketches construction of double wall type coffer dam. **07**

- Q.4** (a) Enlist and explain essential requirement for good formwork. **07**
(b) Sketch typical well caisson. Discuss function of each element of well caisson. **07**

OR

- Q.4** (a) Sketch typical formwork for (i) column (ii) slab and beam floor. **07**
(b) Explain tilt of caisson Discuss remedial measures to rectify tilting of caisson. **07**

- Q.5** (a) Enlist methods to determine load carrying capacity of pile. Explain pile load test with sketches. **07**
(b) Describe with sketches well point systems of dewatering. **07**

OR

- Q.5** (a) Sketch typical pneumatic caisson. Discuss function of each element of pneumatic caisson. **07**
(b) Describe with sketches electro osmosis method of dewatering. **07**
