Seat No.: _____ Enrolment No._____

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**

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