Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

Subject code: X20602 **Subject Name: CONSTRUCTION**

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)**	Discuss various classifications of piles	**07**
	(b)	Briefly explain various methods of rectification of Tilt of Caissons.	**07**
Q.2	**(a)**	Explain with neat sketches: Cellular cofferdams.	**07**
	(b)	Explain various types of pile driving hammers.	**07**
		OR	
	(b)	Differentiate between followings. (1) cast-in-situ and Pre-cast concrete piles (2) cased and uncased cast-in-situ concrete piles	**07**
Q.3	**(a)**	Differentiate between followings: (1) Earth and Rock fill cofferdams (2) Box and Open caissons	**07**
	(b)	Explain well point and electro-osmosis method of control of ground water in excavation.	**07**
		OR	
Q.3	**(a)**	Explain Draglines with neat sketch.	**07**
	(b)	Differentiate between followings. (1) Screw conveyors and Belt conveyors (2) Whirler cranes and Gantry cranes.	**07**
Q.4	**(a)**	Explain Base Isolation method of construction of earthquake resistant buildings.	**07**
	(b)	Describe formwork for beam and column.	**07**
		OR	
Q.4	**(a)**	Describe slip formwork with sketch.	**07**
Q.4	**(b)**	Explain importance of corner reinforcement to construct earthquake resistant buildings.	**07**
Q.5	**(a)**	Explain various safety measures to be taken for demolition of structures.	**07**
	(b)	Explain Power shovel with neat sketch.	**07**
		OR	
Q.5	**(a)**	Write a brief note on caisson sickness.	**07**
	(b)	How will you determine load carrying capacity of pile?	**07**

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