Seat No.:	Enrolment No
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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER - VI (NEW).EXAMINATION - WINTER 2016

	•	ect Code: 2160601 Date: 22/10/2016 ect Name: Advanced Construction and Equipments	
1	lime	: 10:30 AM to 01:00 PM Total Marks: 70 etions:	
		 Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. 	
Q.1	(a) (b)	Explain under which conditions would you prefer pile foundation? Which points you will consider while selecting the type of pile? State factors affecting in selection of equipment in construction industry.	07 07
Q.2	(a)	Why steel formwork is preferred? Explain with neat sketches, the formwork for R.C.C. Beam	07
	(b)	What is meant by Demolition? What are the factors affecting the evaluation of demolition methods?	07
		OR	
	(b)	Write short note on "Methods of construction of Tall Structures"	07
Q.3	(a)	What are the factors to be considered, while making choice between coffer dam and caisson?	07
	(b)	Describe pile driving by drop hammer method. State and explain dynamic formula for determining load carrying capacity of piles. OR	07
Q.3	(a)	Explain with neat sketch Cement grouting process to control the ground water in construction.	07
	(b)	Sketch typical well caisson. Discuss function of each element of well caisson.	07
Q.4	(a) (b)	Explain in detail various financial aspects of procuring construction equipment. Discuss Rimpull and Drawbar pull in detail. OR	07 07
Q.4	(a) (b)	How would you determine economic life of construction equipment? Estimate book value of equipment using sinking fund method at the end of each year for following data. • Initial cost of equipment: 5000000 • Life of equipment: 7 years • Salvage value: 8% of initial cost of an equipment • Rate of Interest = 14%	07 07
Q.5	(a)	Enlist excavating equipment. Draw a neat sketch and explain working of any two excavating equipment.	07
	(b)	Write short note on (i) Crawler Tractor (ii) Wheel tractor OR	07
Q.5	(a)	Enlist the different hoisting equipment. Draw a neat sketch and explain working of any three excavating equipment.	07
	(b)	Define : (i) Shrinkage (ii) Consolidation (iii) Settlement (iv) Internal friction (v) Elasticity (vi) Swell (vii) Permeability	07
