

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- VI (New) EXAMINATION - WINTER 2019

Subject Code: 2160601

Date: 04/12/2019

Subject Name: Advanced Construction and Equipments

Time: 02:30 PM TO 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.

		MARKS
Q.1	(a) Which measures should be taken to achieve economy of formwork?	03
	(b) Define coffer dam. Write brief note on double wall coffer dam.	04
	(c) Explain construction procedure of pneumatic caisson. Also enumerate merits and demerits of pneumatic caisson.	07
Q.2	(a) Differentiate between dragline and clamshell.	03
	(b) Discuss various components of well foundation with their functions.	04
	(c) Enumerate various factors affecting rolling resistance. Also briefly discuss grade resistance.	07
	OR	
	(c) What operations are involved for transportation of materials by a truck? Also discuss factors affecting cycle time of truck.	07
Q.3	(a) Explain operation of scrapers.	03
	(b) Explain various financial aspects of procuring construction equipments.	04
	(c) Discuss various safety measures should be taken before and during demolition.	07
	OR	
Q.3	(a) Discuss main components of belt conveyor system.	03
	(b) Which factors are affecting growth, height and structural form of tall structures?	04
	(c) Explain briefly formwork for R.C.C. walls. Also mention planning & duration of removal of formwork of structural members.	07
Q.4	(a) Discuss various types of rollers utilize in field compaction works.	03
	(b) Write a short note on sinking of caisson.	04
	(c) Explain various components, merits and demerits of well point system.	07
	OR	
Q.4	(a) Discuss briefly hammer drilling method of pile driving.	03
	(b) Explain purposes and different blade movements of bulldozers.	04
	(c) Describe pile load test to determine load carrying capacity of pile in field.	07
Q.5	(a) Describe different types of roll crushers.	03
	(b) Enlist various types of uncased cast in situ concrete piles. Explain any one briefly.	04
	(c) Describe various types of trenching machines. Which points to be kept in mind while selecting trenching equipments?	07
	OR	
Q.5	(a) Discuss chemical grouting method of dewatering.	03
	(b) Enlist various hoisting equipments. Discuss tower cranes briefly.	04
	(c) Explain operation of power shovel. Also discuss factors affecting output of power shovel.	07
