

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2020

Subject Code:2160601

Date:20/01/2021

Subject Name:Advanced Construction and Equipments

Time:02:00 PM TO 04:00 PM

Total Marks: 56

Instructions:

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Define cofferdam. Enlist various types of cofferdams.	03
	(b) What is a Pneumatic Caisson? Discuss the situation in which a Pneumatic Caisson is adopted.	04
	(c) Write classification of piles in detail.	07
Q.2	(a) Explain pile accessories with neat figures.	03
	(b) Write the differences between Caisson and Cofferdam.	04
	(c) Enlist various methods of demolition. Explain any one method in detail using neat diagram	07
Q.3	(a) Write a short note on Diaphragm wall construction.	03
	(b) Discuss the causes of failure of piles.	04
	(c) State the factors which influence the selection of particular type of cofferdam.	07
Q.4	(a) What is a tall structure?	03
	(b) What is a monolith. Write the advantages and disadvantages of a monolith.	04
	(c) Explain in detail Rock filled timber crib cofferdam with neat and clean figure.	07
Q.5	(a) What is the importance of machine in construction?	03
	(b) Write a short note on tunnel boring machine.	04
	(c) Explain belt conveyor system with neat figure.	07
Q.6	(a) What is under reamed pile? Discuss the situation in which under reamed pile is adopted.	03
	(b) Write the importance of Air Compressor.	04
	(c) Explain with neat sketch the formwork of RCC column.	07
Q.7	(a) Give classification of construction equipments.	03
	(b) Explain split formwork with neat sketch.	04
	(c) Discuss sinking and tilting of caissons.	07

- Q.8 (a) Define: 1) Depreciation 2) Scrap value 3) Obsolescence **03**
(b) Define: 1) Drawbar pull 2) Rimpull 3) Rolling Resistance 4) Gradability. **04**
(c) Discuss the advantages and disadvantages of a scraper. **07**

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