

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- VI (NEW) EXAMINATION – WINTER 2021

Subject Code:2160601

Date:24/11/2021

Subject Name:Advanced Construction and Equipments

Time:10:30 AM TO 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.
4. Simple and non-programmable scientific calculators are allowed.

- Q.1 (a) Give complete classification of piles. 03  
(b) Define coffer dam. Write brief note on double wall coffer dam. 04  
(c) What is a caisson? Explain with sketch well type of caisson. 07

- Q.2 (a) Discuss chemical grouting method of dewatering. 03  
(b) Which factors are affecting growth, height and structural form of tall structures? 04  
(c) What are under reamed piles? Explain the situation under which under reamed piles are used. 07

OR

- (c) Explain briefly formwork for R.C.C. walls. Also mention planning & duration of removal of formwork of structural members 07

- Q.3 (a) Which are the points of difference between caisson and coffer dam? 03  
(b) State requirements of good formwork. 04  
(c) Explain various components, merits and demerits of well point system 07

OR

- Q.3 (a) Explain methods of field compaction. 03  
(b) Draw neat sketch of power shovel and also show basic parts. 04  
(c) Enlist various methods of demolition and explain any two in detail. 07

- Q.4 (a) Define: 1) Drawbar pull 2) Rim Pull 3) Rolling Resistance 03  
(b) Write short note on mobile crane with figure. 04  
(c) Enlist various methods of demolition and explain any two in detail 07

OR

- Q.4 (a) Describe different types of roll crushers 03  
(b) Enlist various hoisting equipments. Discuss tower cranes briefly. 04  
(c) Describe various types of trenching machines. Which points to be kept in mind while selecting trenching equipments? 07

- Q.5 (a) Discuss main components of belt conveyor system. 03  
(b) Explain various financial aspects of procuring construction equipments. 04

- (c) Explain operation of power shovel. Also discuss factors affecting output of power shovel. **07**

**OR**

- Q.5** (a) Explain cycle time of truck **03**  
(b) Discuss causes of tilting of caissons. How can it be corrected? **04**  
(c) Enlist the different type of lifting equipment. Explain with sketches of Tower Crane. **07**

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