

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI(NEW) – EXAMINATION – SUMMER 2019****Subject Code:2160601****Date:10/05/2019****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.

- Q.1** (a) What is the importance of machines in construction? **03**  
(b) Draw neat sketch of power shovel and also show basic parts. **04**  
(c) Differentiate between End bearing pile and friction pile with their figures. **07**

- Q.2** (a) Which are the points of difference between caisson and coffer dam? **03**  
(b) Define: Rolling resistance, Rimpull, Drawbar pull and Gradability. **04**  
(c) Enlist various methods of dewatering and explain freezing process with figure. **07**

**OR**

- (c) Enlist methods of demolition and explain hand demolition and wrecking ball method in detail. **07**
- Q.3** (a) Discuss various causes of failure of piles. **03**  
(b) Write short note on mobile crane with figure. **04**  
(c) Write short note on tilting of caisson. **07**

**OR**

- Q.3** (a) What precautions should be taken for longer life of conveyor belts? **03**  
(b) State the factors which influence the choice of a particular type of coffer dam. **04**  
(c) Which are the advantages and disadvantages of scraper? **07**
- Q.4** (a) Explain methods of field compaction. **03**  
(b) Which precautions should be taken to avoid caisson sickness? **04**  
(c) Draw a neat sketch of belt conveyor system and describe its components. **07**

**OR**

- Q.4** (a) What do you mean by tall structure? Why tall structures are required? **03**  
(b) Differentiate between standard equipment and special equipment. **04**  
(c) Write short note on slip formwork. **07**
- Q.5** (a) Draw neat sketch of formwork for R.C.C. column. **03**  
(b) Explain cycle time of truck. **04**  
(c) Differentiate between crawler mounted dozer and wheel mounted dozer. **07**

**OR**

- Q.5** (a) Write short note on wagons. **03**  
(b) State requirements of good formwork. **04**  
(c) Write short note on wheel type trenching machine with its figure. **07**

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