

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**PDDC SEM-II Examination-Dec-2011**

**Subject code: X20602**

**Date: 24/12/2011**

**Subject Name: Construction**

**Time: 10.30 am -1.00 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) Write uses of pile foundation and differentiate between load bearing piles and non-load bearing piles. **07**  
(b) Enlist pile driving formulas and explain engineering news formula for pile driving. **07**

- Q.2** (a) What is coffer dam? Write uses and types of coffer dams. **07**  
(b) What are the precautions should be taken to prevent leakage in coffer dams? **07**

**OR**

- (b) Explain in brief concrete coffer dams and suspended coffer dams. **07**

- Q.3** (a) Define caisson. Write uses of caissons and classify the caissons. **07**  
(b) What is a box caisson? Which are the conditions favorable for the construction of box caisson? Explain the method of installing a box caisson. **07**

**OR**

- Q.3** (a) What is a pneumatic caisson? Where it is adopted? Write its construction and sinking. **07**  
(b) What is meant by tilting of caisson? What are the causes of tilting? How can a tilted caisson be brought in correct position? **07**

- Q.4** (a) Why formwork is necessary? Explain the requirements of formwork. **07**  
(b) What are slip forms? Explain their operation and advantages. **07**

**OR**

- Q.4** (a) Describe the method of freezing process for dewatering the foundation trenches and state advantages and limitations of freezing process. **07**  
(b) Which are the guidelines for construction of earthquake resistant building? **07**

- Q.5** (a) Write advantages and disadvantages of pre-stressed concrete. **07**  
(b) Enlist various methods of demolition of structure and explain any one in detail. **07**

**OR**

- Q.5** (a) Discuss the factors affecting for selection of construction equipments? **07**  
(b) What is the use of belt conveyor? Explain essential parts of belt conveyor. **07**

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