

Student Exam No:

GANPAT UNIVERSITY
B.TECH SEM VI CIVIL ENGINEERING
REGULAR EXAMINATION MAY/JUNE - 2013
2CI606 ADVANCED CONSTRUCTION TECHNOLOGY

Time: 3 Hours

Max Marks: 70

- Instructions: - (1) Answer to the two sections must be written in separate answer books.
(2) Figures to the right indicate full marks.
(3) Assume suitable data if required.

SECTION - I

- Q1(A) Define Pile foundation. Write a short note on classification of piles based on its function. (6)
(B) Define cofferdam. Write down uses of cofferdam. What are the points to be kept in mind while constructing a cofferdam? (6)
- OR**
- Q1(A) Describe the various types of pile hammer which are used in the process of pile driving. (6)
(B) Explain Cellular Cofferdams. (6)
- Q2(A) Describe the process of well-point system for dewatering the foundation trenches. (6)
(B) What do you mean by temporary structures and formwork? Briefly explain various requirements of good formwork. (5)
- OR**
- Q2(A) Explain the general principles for earthquake resistant buildings. (6)
(B) What is meant by demolition? What are the factors affecting the evaluation of demolition methods. (5)
- Q3(A) Write short note on (i) Earth fill Cofferdams (ii) Sand-bag cofferdam. (4)
(B) What is pneumatic caisson sickness? How is it caused? What are the precautions to be taken to avoid caisson sickness? (4)
(C) Explain Electro-osmosis for dewatering. (4)

SECTION - II

- Q4(A)** What are the contributions and importance of construction equipment in construction industry? (6)
- (B)** Compare Crawler mounted bulldozer with Wheel mounted bulldozers. (3)
- (C)** Explain Clamshell with neat sketch. (3)
- OR**
- Q4(A)** Describe operation of a Power shovel, Dragline and Trenching machines. (6)
- (B)** Enlist different conveying equipment. Describe any two of them. (6)
- Q5(A)** Write a short note on "Chain Hoists" with neat sketch. (6)
- (B)** Define tunnel. What are the advantages and disadvantages of tunnel? (6)
- OR**
- Q5(A)** Describe wagon drills with neat sketch. (3)
- (B)** Give reasons: the shield is provided with cutting edges with proper stiffeners. (3)
- (C)** Explain different methods of blasting. (6)
- Q6(A)** Describe gantry cranes. (3)
- (B)** A construction machine costs Rs. 30,000 and has an expected life of 5 years with salvage value of Rs. 5000. It is expected to work 2000 hours in a year. Compute the yearly depreciation of the machine using straight line method. (8)

END OF PAPER