

GANPAT UNIVERSITY**B. Tech. Semester: 6th Civil Engineering****Regular Examination (CBCS) - April – June 2015****2CI606: Advanced Construction Technology****Maxi. Time: 3 Hours****Maxi. Marks: 70**

- Instruction:** 1 Answer to the two sections must be written in separate answer book.
2. Figures to the right indicate full mark.
3. Assume suitable data if required.

Section - I

- Que. – 1 (A) Explain with the help of sketches, the method of formation of Franki pile. 4
- (B) A reinforced concrete pile weighing 40KN, inclusive of helmet & dolly, is driven by a drop hammer weighing 354KN & having an effective fall of 1 mt. the average set per blow is 1.2cm. The total temporary elastic compression is 1.6cm. Assuming the co-efficient of restitution as 0.25 & factor of safety of 2, determine ultimate bearing capacity & allowable load for the pile. 3
- (C) What is formwork? State the requirement of good formwork. 5
- OR**
- Que. – 1 (A) Describe the pile load test for determining the bearing capacity of a pile. 3
- (B) Explain the importance and necessity of the pile cap and pile shoes. 4
- (C) Explain the materials used for preparing formwork. 5
- Que. – 2 (A) List out the general principles for earthquake resistant building. Explain vertical layout of building configuration with neat sketches. 3
- (B) A construction machine cost Rs 25000 & has an expected life of year 7 years. Find out the which method give maximum salvage value after 7 Years & also find out which method give maximum value of depreciation/ year from the starting year. 7
- (C) Define tunnel & open cut. 2
- OR**
- Que. – 2 (A) Give codal provision for masonry unit, mortar, walls, masonry bond and opening in walls. 5
- (B) List out conveying equipment and explain any three in detail. 4
- (C) Write down the classification of tunnel. 3
- Que. – 3 (A) Explain pre-tensioning & post tensioning with sketches. 4
- (B) Describe in brief, the various method of demolition. 7

Section – II

- Que. – 4 (A) Write short note on Earth cofferdam and Rock-fill cofferdam with sketch. 6
(B) What is Cofferdam? Enlist uses of Cofferdam. 6
- OR
- Que. – 4 (A) Write short note on double-walled cofferdam with sketch. 6
(B) Discuss to point to be consider for control of leakage in Cofferdams. 6
- Que. – 5 (A) What is caisson? Enlist uses of caissons. Difference between cofferdam and caisson. 5
(B) Enlist classification of caisson. Explain Box caisson with sketch. 6
- OR
- Que. – 5 (A) Write short note on pneumatic caisson with sketch. 5
(B) Write short note on tilting of caisson. 6
- Que. – 6 (A) Enlist methods of dewatering. Explain well point system with sketch. 6
(B) Define dewatering. Explain freezing process of dewatering with sketch. 6

END OF PAPER