

B.Tech Sem – V (2007 Course) (Civil Engg.) : WINTER - 2018
SUBJECT: CONSTRUCTION OPERATIONS & EQUIPMENTS

Day : Saturday
Date : 24/11/2018

Time : 02.30 PM TO 05.30 PM
Max. Marks: 80

W-2018-2793

N. B.:

- 1) **Q. No.1 and Q. No.5 are COMPULSORY.** Out of the remaining attempt **ANY TWO** questions from each Section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answer to both the sections should be written in **SEPARATE** answer books.
- 4) Assume suitable data if necessary.

SECTION-I

- Q.1** a) What is the necessity of mechanization in construction industry? (05)
b) Explain in detail pile driving techniques. (05)
c) Explain procedure for tremix concreting. (04)
- Q.2** a) For the construction of G+10 residential building it is proposed to use prefabricated beam and slab units. Enlist the equipments which are required for the successful launching of the girders and their function. (05)
b) Discuss the role played by construction industry in urban development. (04)
c) What are the advantages and disadvantages of high-rise structures? (04)
- Q.3** a) What are the factors to be considered during selection of cofferdam? (05)
b) Define the following terms. (04)
i) Negative Skin Friction ii) Positive Skin Friction.
c) Draw a neat sketch of pneumatic Caissons. Label all components and give functions of each. (04)
- Q.4** a) Explain the procedure for grouting. (05)
b) What are precautions to be taken for the concreting in cold weather conditions? (04)
c) Explain the trenchless technology in detail. (04)

SECTION-II

- Q.5** a) What are the types of dumpers? Explain their suitability. (05)
b) Enlist the types of rollers and explain use of each. (05)
c) Enlist and explain the types of generators. (04)
- Q.6** a) Enlist the different types of dozers with neat sketch. (05)
b) Explain the group behavior of earth moving machineries with suitable example. (04)
c) Explain functions and use of Jaw Crusher with neat labeled sketch. (04)
- Q.7** a) State various methods adopted for slope protections. (05)
b) Explain the different functions of geosynthetic materials in construction industry. (04)
c) What are the factors affecting efficiency of equipments? (04)
- Q.8** a) What are the applications of welding operations in construction industry? (05)
b) What are the factors affecting selection of ventilation system. (04)
c) Explain reciprocating compressors. (04)

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