B.TECH SEM – V (2007 COURSE) (CIVIL ENGG.) : SUMMER - 2018

SUBJECT: CONSTRUCTION OPERATIONS & EQUIPMENTS

Day : **Tuesday** | **S-2018-2655** | Time : **10.00 AM TO 01.00 PM**
Date : **22/05/2018** | Max. Marks: 80

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)** Explain role of construction industry in global development. **(05)**
b) Explain the term negative skin friction in detail. **(05)**
c) What are the different methods of conveying concrete? **(04)**

Q.2 **a)** Enlist the equipments and machinery required for high-rise structures. **(05)**
b) Explain the use of special types of formwork for erection of high rise structures. **(04)**
c) Explain the following types of construction **(04)**
i) Light Duty ii) Medium Duty iii) Heavy Duty

Q.3 **a)** Explain in detail pile driving techniques. **(05)**
b) Explain with neat sketch double sheet pile cofferdam. **(04)**
c) Explain with neat sketch sinking of Caissons. **(04)**

Q.4 **a)** Prepare a flow diagram of ready mix concrete plant. **(05)**
b) What is the difference between gunneting and shotcreting? **(04)**
c) Explain slip form shuttering. **(04)**

SECTION-II

Q.5 **a)** List out the equipments required for demolition of G+2 constructions. State the use of each equipment. **(05)**
b) Write the procedure for construction of Gabion Walls. **(05)**
c) Explain importance of record keeping machineries and equipments. **(04)**

Q.6 **a)** Draw a neat labeled sketch of **(05)**
i) Power Showel ii) Back Hoe
b) Explain the estimation and economics of earth moving equipments. **(04)**
c) Explain any three types of dumpers with neat sketch. **(04)**

Q.7 **a)** Explain different types of geosynthetic materials and their uses. **(05)**
b) Enlist and explain different types of paving equipments. **(04)**
c) Enlist and explain different types rollers **(04)**

Q.8 **a)** What are the different types of generators? Explain any two. **(05)**
b) What are different types of compressors? Explain use of each. **(04)**
c) What are the precautions to be taken for preventing accidents from fire on construction site? **(04)**

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