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M.TECH
P2CNBC08

2nd Semester Regular Examination 2016-17
Construction Equipment Management
BRANCH: Construction Technology and Management
Time: 3 Hours
Max Marks: 100
Q.CODE: Z805

Answer Question No.1 which is compulsory and any FOUR from the rest.
The figures in the right hand margin indicate marks.

- Q1 Answer the following questions : (2 x 10)
- a) Draw a neat sketch of crawler mounted bulldozer and show its various parts.
 - b) What are the factors that influence the selection of suitable excavating equipment?
 - c) How can scrapers help to increase the speed of construction?
 - d) What is the need of equipment management in site?
 - e) What is the equipment used for driving a precast pile in a sandy soil?
 - f) What are the factors affecting the selection of drilling equipment?
 - g) What are the parameters to be examined while blasting for quarrying?
 - h) Describe the equipments used for handling and transporting concrete.
 - i) What are the advantages of using belt conveyors?
 - j) Name the equipments used for volume batching?
- Q2 a) With appropriate diagrams, describe the working and applications of any excavating equipment. (10)
- b) What is the use of a belt conveyors and what are its essential parts? (10)
- Q3 a) Explain briefly about pile hammers. (10)
- b) Explain methods of supporting and positioning piles during driving. (10)
- Q4 a) Explain in detail the importance of concrete mixtures in construction work. Mention the points which are to be carefully paid attention to when the concrete mixtures are used. (10)
- b) Explain briefly about various types of centrifugal pumps. (10)
- Q5 a) What are the components of truck cycle time? Discuss the advantages and disadvantages of small trucks compared with large trucks. (10)
- b) What is a dozer? Compare wheel dozer with crawler dozer. (10)
- Q6 a) A company having a cost of capital rate of 8% purchases a Rs.300000/- tractor. This machine has an expected service life of 4yr and will be utilized 2500 hr per year. The tires on this machine cost Rs.45000/-. The estimated salvage value at the end of 4 years is Rs. 50,000/-. Calculate the depreciation portion of the ownership cost for this machine using the time value method. (10)
- b) Explain about different types of self loading scrapers. (10)
- Q7 a) Write short notes on i) Depreciation cost and ii) safety management (10)
- b) Write short notes on i) crawler tractor and ii) wheel tractor (10)