

01485

Diploma in Civil Engineering

Term-End Examination

June, 2012

BCEE-052 : CONSTRUCTION EQUIPMENT

Time : 2 hours

Maximum Marks : 70

Note : Answer five questions in total. Questions number one is compulsory. Attempt any four questions out of the remaining questions, use of calculator is permitted.

1. Select the correct alternative from the given four choices in questions (a) to (g) below : **2x7=14**
- (a) Disputes in construction industry :
- (i) may develop due to differences in interpretations of contract conditions
 - (ii) may affect speed of construction
 - (iii) may be solved by proper understanding of other's position.
 - (iv) all the above
- (b) Which of the following is a part of a construction equipment ?
- (i) Boom (ii) Loam
 - (iii) Clay (iv) Rock
- (c) Which of the following may affect output of a construction equipment ?
- (i) Type of soil
 - (ii) Drainage conditions at site
 - (iii) Condition of equipment
 - (iv) all the above

- (d) Accidents at a construction site :
- (i) affect progress of work
 - (ii) bring suffering to workers
 - (iii) may increase cost of project
 - (iv) all the above are true
- (e) Which of the following is not the name of a construction equipment ?
- (i) scraper (ii) Dozer
 - (iii) Shovel (iv) Inspection
- (f) Elevators are used for :
- (i) excavation of soil
 - (ii) vertical and horizontal movement
 - (iii) drilling
 - (iv) none of the above
- (g) Which of the following may be associated with value of a construction equipment ?
- (i) Elevated (ii) Salvage
 - (iii) Drilling (iv) Dumpers
2. (a) Enlist any seven precautions to be taken at a construction project site to reduce accidents. 7
- (b) A calculated amount of soil is to be excavated at a project site. Discuss how the number of excavation equipment required for the job, may be calculated to complete the work in a given period of time. Assume that output of one equipment is known to you. 7

3. Describe 'Straight line method' of calculating yearly depreciation for an equipment with an example. 14
4. Discuss the working of a construction equipment used for excavation of soil, with a neat line sketch of the equipment. Write some of its salient features. 14
5. What do you understand by 'Mass concrete' ? Write some ways to keep a lower temperature of such a concrete ? 14
6. What are the various types of operations which may be conducted with the help of Bulldozers ? Compare use of crawler mounted and wheel mounted bulldozers. 14
7. Write short notes on the following. $3\frac{1}{2} \times 4 = 14$
- (a) Power shovels
 - (b) Conveyor Belts
 - (c) Tunneling in rocks
 - (d) Power crane
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