

**DIPLOMA IN CIVIL ENGINEERING DCLE(G)
DCLEVI**

Term-End Examination

June, 2013

BCEE-052 : CONSTRUCTION EQUIPMENT

Time : 2 hours

Maximum Marks : 70

Note : Answer any five questions. Question no.1 is compulsory.

Select *one* correct answer for the following : $7 \times 2 = 14$

1. (a) In big construction projects, the % cost of construction equipment in terms of the total project cost is about :
- (i) 10-20% (ii) 15-30%
(iii) 45-50% (iv) 5-10%
- (b) Which equipment will you advocate for handling loose material such as sand, gravel, etc ?
- (i) Clam shell (ii) Power shovel
(iii) Drag line (iv) Back hoe
- (c) Bull dozers are mainly used for :
- (i) Speeding earth fill and clearing work
(ii) Excavation work
(iii) Removing wet soil
(iv) Clearing rocky soils

- (d) For conveying materials horizontally, vertically or up an incline, the best suited one is :
 - (i) Screw conveyor
 - (ii) Bucket conveyor
 - (iii) Cable way
 - (iv) None of these
- (e) For large construction projects, the following type of mixer can be used :
 - (i) Pan type mixer
 - (ii) Tilting mixer
 - (iii) Non-tilting mixer
 - (iv) Truck mixer
- (f) For supplying freshly mixed concrete to places away from the place of mixing, the equipment used is :
 - (i) Pan type mixer (ii) Truck mixer
 - (iii) Tilting mixer (iv) None of these
- (g) For drilling holes in tunnelling work up to 15m deep at any angle, the best equipment is :
 - (i) Jack hammer
 - (ii) Drifters
 - (iii) Drifters mounted on trucks
 - (iv) None of these

2. Describe the role of construction equipment in the speedy and economical completion of large construction projects. 14

3. Describe in detail, the operation and application of the following types of excavating equipment with line-diagram showing the basic parts : 7+7=14
(a) Power shovel. (b) Back Hoe.
4. Discuss the role of tractors in earth moving. What considerations govern the selection of wheel type or crawler type tractor on a job ? Compare the application of the two types of tractors. 14
5. What are the different types of cranes used in the construction industry ? Describe the application of each type and its method of operation. 14
6. Discuss briefly the advantages of using conveying equipment and the situation in which they will be necessary ? 14
7. What are the different types of crushers used for production of aggregate ? Describe the operation of each type, briefly. 14
8. Write a brief note on *any four* of the following : 4x3.5=14
(a) Routine Maintenance
(b) Periodical Maintenance
(c) Log Books
(d) Vibrators for concrete
(e) Rolling equipment
(f) Post cooling systems
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