No. of Printed Pages : 4

BCEE-052

DIPLOMA IN CIVIL ENGINEERING
DCLE(G) / DCLEVI

Term-End Examination

00783

June, 2015

BCEE-052 : CONSTRUCTION EQUIPMENT

Time : 2 hours *Maximum Marks : 70*

Note : *Answer any **five** questions. Question no. 1 is **compulsory**. Attempt any **four** questions out of the remaining. Use of calculator is permitted.*

1. Select the most appropriate answer from the options given. *7×2=14*

(a) Select the odd one out of the following :

(i) Power shovel

(ii) Hoe

(iii) Tower crane

(iv) Dragline

(b) Which of the following is ***not*** a hand-held drill ?

(i) Drilling jumbo

(ii) Jack hammer

(iii) Stopper drill

(iv) Feed leg drill

(c) Sheep's foot roller is used for

(i) Sandy soils

(ii) Silty soils

(iii) Clayey soils

(iv) All of these

(d) The boom of Guy Derrick crane can revolve through

(i) 180°

(ii) 270°

(iii) 360°

(iv) None of these

(e) Escalators are used for

(i) Vertical transportation

(ii) Horizontal transportation

(iii) Radial transportation

(iv) None of these

(f) System for hauling, hoisting and lowering material is

(i) Belt conveyor

(ii) Cableway

(iii) Crane

(iv) None of these

(g) Maintenance to prevent breakdowns, ensure optimum production by equipment and extending its life is called

(i) Routine maintenance

(ii) Periodical maintenance

(iii) Preventive maintenance

(iv) None of these

2. Enlist the different methods to determine the deprecation rates of construction equipment. Explain any one. *14*

3. (a) Explain the operation of a power shovel. *7*

(b) Enlist the hand-held drills. Explain any one. *7*

4. (a) Explain the mechanics of compaction of earth by a sheep's foot roller. *7*

(b) What are the uses of front-end loaders ? Explain crawler-type front-end loaders. *7*

5. What are the different types of cranes used in construction projects ? Explain any two. *14*

6. (a) What are tipping wagons and their uses ? *7*

(b) What are non-tilting type of concrete mixers ? *7*

7. Write short notes on any ***four*** of the following : $4 \times 3\frac{1}{2} = 14$

(a) Objectives of inspection

(b) Methods of reducing accidents

(c) Fork lift trucks

(d) Elevators

(e) Batches

(f) Cycle time of machine