No. of Printed Pages : 4

BCEE-052

DIPLOMA IN CIVIL ENGINEERING
DCLE(G) / DCLEVI

Term-End Examination

0011 **December, 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 questions. Use of calculator is permitted.*

1. Choose the correct answer. *7×2=14*

(a) Which of the following is a part of a construction equipment ?

(i) Boom

(ii) Loam

(iii) Clay

(iv) Rock

(b) Straight line method is used to determine

(i) Degree of compaction

(ii) Particle size distribution

(iii) Depreciation

(iv) None of these

(c) Which machine is used to excavate below the level at which the machine rests ?

(i) Dragline

(ii) Crane

(iii) Bulldozer

(iv) Hoe

(d) Drilling jumbos are used in

(i) building construction

(ii) dam construction

(iii) tunnel construction

(iv) None of these

(e) Smooth wheel rollers are suitable for

(i) Clayey soil

(ii) Silty soil

(iii) Granular soil

(iv) None of these

(f) This machine is very useful for handling cartons, boxes, crates, bags, etc.

(i) Front-end loader

(ii) Derrick crane

(iii) Escalator

(iv) Fork lift truck

(g) Log book contains information about

(i) consumption of stores

(ii) repairs and replacements

(iii) breakdown hours and working hours

(iv) All of these

2. A construction machine costs ₹ 12,000 and has an expected life of 5 years and a salvage value of ₹ 2,000. It is expected to work 2000 hours in a year. Compute the yearly depreciation for the machine using straight line method. Give the analysis in the tabular form. *14*

3. (a) What are the uses of a bulldozer on a project ? *7*

(b) What are smooth wheel rollers ? If a roller is designated as 7·3 – 12·8 t, what does it mean ? *7*

4. (a) What is the purpose of elevators in a construction project ? *7*

(b) What are the uses of belt conveyors ? What are its essential parts ? *7*

5. What are tilting and non-tilting types of concrete mixers ? *14*

6. Mention the causes of accidents on construction sites. How can these be reduced ? *14*

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

   (a) Draglines

   (b) Clamshells

   (c) Drilling Jumbos

   (d) Hydraulic Cranes

   (e) Escalators

   (f) Routine Maintenance