DIPLOMA IN CIVIL ENGINEERING (DCLE(G))

Term-End Examination,

December 2019

BCE-034 : ESTIMATING AND QUANTITY SURVEYING - I

Time : 2 Hours]   *[Maximum Marks : 70*

Note : (i) *Question No. 1 is* **Compulsory.**

(ii) *Attempt* **any four** *questions from the remaining questions.*

(iii) *Use of calculater is permitted.*

(iv) **All** *questions carry* **equal** *marks.*

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1. Choose the correct alternative.   7×2=14

   a) The formula for computing volume of earthwork along road alignment by "Prismoidal formula method" is

   (i) $\frac{l}{6}(A_1 + 4A_m + A_2)$

   (ii) $\left(\frac{A_1 + A_2}{2}\right)l$

   (iii) $\left(\frac{h_1 + h_2}{2}\right)l$

   (iv) $A_m \times l$

b) The units of measurement of earthwork in filling is

   (i) m^2 (ii) m^3

   (iii) Per m^2 (iv) Per m^3

c) The least period for form to remain in position in case of side of walls, columns, beams and foundation is

   (i)   14 days   (ii)   28 days

   (iii) 48 hours   (iv) 24 hours

d) Which of the following items are part of "Overhead charges" in an estimate?

   (i)   Cost of materials

   (ii) Cost of steel

   (iii) Cost of bricks

   (iv) Communication postage, telephone etc.

e) Muster roll is used for

   (i)   Recording attendance of daily labourer employed

   (ii) Recording site instructions

   (iii) Recording measurements of executed work

   (iv) Recording test results of materials used

f) R.L. of formation line of road depends on

   (i)   Width of road formation

   (ii) Longitudinal falling or rising gradient of road formation

   (iii) Side slope in cutting

   (iv) Side slope in filling

g) Queen post truss is best suited upto a span of about

   (i) 28 m   (ii) 21 m

   (iii) 14 m   (iv) 7 m

2. Explain a method of computing volumetric quantities of earth work along a road alignment.   14

3. Describe the general specifications of Lime Concrete (LC) work in buildings.   14

4. Explain the procedure of estimation of earthwork in road.   14

5. a) Draw a measurement book used for recording book of quantities of different items of a work. Explain its components.   7

   b) Discuss the requirement of men and material for $10m^3$ of first class brick work in superstructure.   7

6. a) Classify various types of work in general.   7

   b) Discuss the conditions of a contract.   7

7. Write short notes on **any two** of the following : $2×7=14$
   a) Deposit works

   b) Technical sanction

   c) Earnest money

   d) Estimation of overhead charges

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8. Differentiate between terms in **any two** of the following :
$2 \times 7 = 14$

   a) Tender and Contract

   b) Spoil bank and borrow pit

   c) Earthwork in cutting and filling

   d) Lead and lift.

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