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BCE-034

DIPLOMA IN CIVIL ENGINEERING
DCLE(G) / DCLEVI

Term-End Examination

00180 **June, 2016**

BCE-034 : ESTIMATING AND QUANTITY SURVEYING – I

Time : 2 hours *Maximum Marks : 70*

Note : *Attempt **five** questions in all. Question number **1** is compulsory. Use of calculator is permitted.*

1. Choose the correct alternative from the options given. *7×2=14*

(a) The formula for computing the 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 unit of measurement of earthwork in borrow pits is

(i) m

(ii) m^2

(iii) m^3

(iv) kg

(c) Least period for formwork to remain in position in case of undersides of beams and arches with more than 9·0 m span is

(i) 7 days

(ii) 14 days

(iii) 28 days

(iv) 365 days

(d) The R.L. of a 'canal bed' at any point, in case the canal is in cutting, will be

(i) more than the R.L. of the original ground

(ii) same as of the original ground

(iii) either more or less than the original ground

(iv) less than the R.L. of the original ground

(e) M.B. is used for

(i) Recording of work done

(ii) Recording of attendance

(iii) Recording of test results

(iv) Recording of site instructions

(f) Blasting is required for cutting

(i) Soft rocks

(ii) Hard rocks

(iii) Soft soils

(iv) Hard soils

(g) Half brick wall masonry is generally used for the construction of

(i) Retaining wall

(ii) Load bearing wall

(iii) Partition wall

(iv) Caissons

2. (a) Explain the average cross-sectional area method of computing volumetric quantities of earthwork along road alignment. *4*

(b) A stretch of road is 100 m long. For making the road the earthwork is to be done in cutting. The cross-sectional area of earth in cutting is 60 m^2 and 70 m^2 at the ends, respectively. Calculate the earthwork in cutting for the road using 'Average cross-sectional area method'. *10*

3. (a) Describe the general specifications of Reinforced Concrete Construction. *7*

(b) Explain the detailed specifications of first-class brick work. *7*

4. Calculate the cost of 10 m^3 of cement concrete (with 40 mm gauge stone ballast, coarse sand and cement in 4 : 2 : 1 proportion). Use prevailing market rate. *14*

5. (a) What do you mean by estimates ? Explain the necessity of preparing an estimate of building works. *7*

   (b) Write in brief about the termination of contract. *7*

6. Differentiate between the following : $4 \times 3\frac{1}{2} = 14$

   (a) Earnest money and Security money

   (b) Earthwork in Filling and Cutting

   (c) Tender and Contract

   (d) Administrative Approval and Technical Sanction

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

   (a) Contract Documents

   (b) Estimation of Overhead Charges

   (c) Special Repairs

   (d) Estimation of Brick Masonry in Arches