

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

Term-End Examination

00293

June, 2018

**BCE-034 : ESTIMATING AND QUANTITY
SURVEYING - I**

Time : 2 hours

Maximum Marks : 70

Note : Attempt five questions in all. Question no. 1 is compulsory. Assume suitable data wherever required. Use of scientific calculator is permitted.

1. Choose the correct answer from the given alternatives :

$7 \times 2 = 14$

(a) Unit of measurement for glazed shutters is

(i) sq. m.

(ii) cu. m.

(iii) cu. ft.

(iv) metre

(b) For estimation of a hexagonal building, the useful method is

(i) crosswall method

(ii) polygonal method

(iii) centre line method

(iv) plinth area method

- (c) Queen post trusses are best suited up to a span of
- (i) 9·00 m
 - (ii) 12·00 m
 - (iii) 15·00 m
 - (iv) 30·00 m
- (d) M.B. is used for recording of
- (i) Site notes
 - (ii) Test results
 - (iii) Attendance
 - (iv) Work done
- (e) Lean cement concrete ratio for use in foundations is
- (i) $1 : 1\frac{1}{2} : 3$
 - (ii) 1 : 2 : 4
 - (iii) 1 : 3 : 6
 - (iv) 1 : 4 : 8
- (f) Half-brick masonry walls are used for
- (i) Retaining walls
 - (ii) Crate walls
 - (iii) Load bearing walls
 - (iv) Partition walls
- (g) Generally contractor's profit is taken as
- (i) 2·50%
 - (ii) 5·00%
 - (iii) 10·00%
 - (iv) 12·50%

2. (a) What are various methods of estimation of earthwork in roads ? Explain any one method with the help of neat sketch.
- (b) Calculate the volume of earthwork for 100 m length of road in a uniform ground. Height of bank at one end is 0.75 m and other end is 1.25 m. Formation width of road is 10.00 m and side slope of embankment is 1 : 2. Ground does not have any cross slope. 2×7=14

3. A single room has the following dimensions : Size 4.00 m × 3.00 m, height 3.00 m, depth below GL is 90 cm. Plinth is 30 cm above GL. P.C.C. 1 : 4 : 8 in foundation is 80 cm wide and 20 cm thick, bottom brickwork footing is 50 cm wide and 20 cm thick, next footing is 40 cm wide and 20 cm thick. Plinth is 30 cm wide. Walls in superstructure are 20 cm thick in first class brickwork with 1 : 6 mortar. D.P.C. is 2.5 cm thick in 1 : 2 : 4 cement concrete. Calculate following quantity of items of work : 14

- (i) Earthwork in excavation
- (ii) P.C.C. 1 : 4 : 8 in foundation
- (iii) Brickwork in foundation and plinth
- (iv) 2.5 cm thick D.P.C. 1 : 2 : 4 cement concrete

4. Prepare the Analysis of Rate for any **one** of the following items of works : 14

- (i) Brickwork Ist class with 1 : 6 cement mortar
- (ii) R.C.C. 1 : 2 : 4 in roof slab
- (iii) Plaster 1 : 6, 25 mm thick
- (iv) D.P.C., 2.5 cm thick, 1 : 2 : 4 cement concrete

5. Write down brief specification of any *two* items of the following works :

$$2 \times 7 = 14$$

- (i) 1 : 4 cement mortar flush pointing
- (ii) Earthwork in excavation
- (iii) Distempering works
- (iv) Brickwork 2nd class in foundation

6. Differentiate between any *four* of the following terms (writing briefly) :

$$4 \times 3 \frac{1}{2} = 14$$

- (i) Tender and Contract
- (ii) Class 'A' and Class 'B' building
- (iii) Plastering and Pointing
- (iv) Muster-roll and Account-book
- (v) Turfing and Pitching on slopes
- (vi) Snowcem and Distempering works

7. Write short notes on any *four* of the following :

$$4 \times 3 \frac{1}{2} = 14$$

- (i) Special Repair Works
- (ii) Work Charged Establishment
- (iii) Condition of Contract
- (iv) Appropriation of Fund
- (v) Security Money
- (vi) Rate Analysis