

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

Term-End Examination

1492

December, 2016

**BCE-042 : ESTIMATING AND QUANTITY
SURVEYING – II**

Time : 2 hours

Maximum Marks : 70

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

1. Select the correct answer from the given alternatives. 7×2=14

(a) The nominal mix ratio for the grade of concrete M 15 is

(i) 1 : 1 : 2

(ii) 1 : 2 : 4

(iii) 1 : 3 : 6

(iv) 1 : 4 : 8

(b) The unit of measurement for GI or GS corrugated sheets is

(i) sq. m

(ii) sq. ft.

(iii) kg

(iv) quintal

- (c) As per the method of measurement, the area shall be worked out nearest to
- (i) 0.001 m^2
 - (ii) 0.01 m^2
 - (iii) 0.10 m^2
 - (iv) 1.00 m^2
- (d) The room **not** considered for calculation of carpet area is
- (i) Bedroom
 - (ii) Living room
 - (iii) Bathroom
 - (iv) Dining room
- (e) No deduction shall be made for plastering opening up to
- (i) 1 sq. m
 - (ii) 0.75 sq. m
 - (iii) 0.5 sq. m
 - (iv) 0.25 sq. m
- (f) The iron bars and grills in windows are measured as area for painting and multiplied by _____ times for overall quantity.
- (i) $\frac{1}{2}$
 - (ii) 1
 - (iii) $1\frac{1}{2}$
 - (iv) 2

(g) Mazdoor is a labour of the following category :

- (i) Unskilled
- (ii) Semi-skilled
- (iii) Skilled
- (iv) Waterman

2. (a) What are the different types of estimates ? 4

(b) Explain the method of Detailed estimate with tables. 10

3. A road is to be constructed in a side long ground partly in cutting and partly in banking. The formation of the road is 10 m, cross slope of ground is 6 : 1, side slopes in banking 2 : 1 and cutting are $1\frac{1}{2}$: 1, depth of centre is 45 cm. Calculate the quantity of earthwork in banking and cutting for a length of 200 m. 14

4. A room of size 6 m × 3 m with wall thickness 30 cm is covered with a one-way slab of 18 cm thickness, having main reinforcement 10 mm diameter with spacing 15 cm and distribution bar of 8 mm diameter with spacing of 25 cm c/c. Calculate the quantities of the following : $2+5+5+2=14$

- (a) Form work
- (b) Main reinforcement
- (c) Distribution bars
- (d) RCC $1 : 1\frac{1}{2} : 3$

5. Analyse the rate for cement plaster 1 : 4, 12.5 mm thick, the data given are :
 Wages for labour per day (a) Mason – ₹ 500
 (b) Mazdoor – ₹ 300 (c) Bhishti – ₹ 150 and cost of cement – ₹ 300 per bag, sand – ₹ 700 per cu. m.

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6. (a) What are the methods to calculate the quantities of earthwork excavation and foundation for a residential building?

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- (b) A building with single room has size 4 m × 3 m and wall thickness is 200 mm. Calculate the quantities of (i) Earthwork excavation, (ii) PCC 1 : 3 : 6, (iii) Brick-work in CM 1 : 4 for foundation up to plinth level with the data given in Figure 1.

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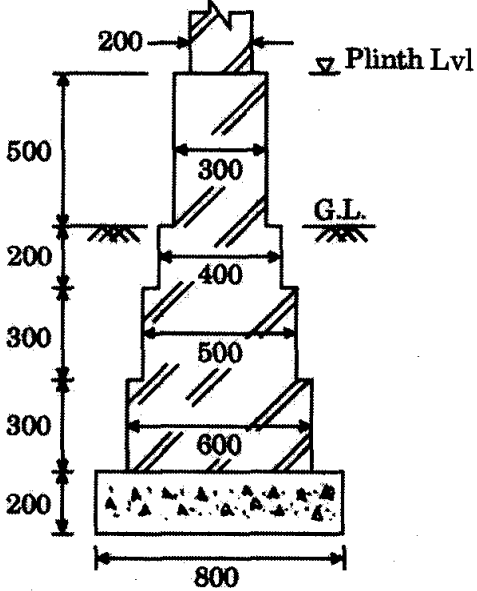


Figure 1 : Cross-section of foundation

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

- (a) Day Work
 - (b) Specifications
 - (c) Work Charge Establishment
 - (d) Terrazzo Floor
 - (e) Tender
 - (f) M. Book
 - (g) Stock
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