

Diploma in Civil Engineering Term-End Examination December, 2006

BCE-034 : ESTIMATING & QUANTITY SURVEYING-I

Time: 2 hours Maximum Marks: 70

Note: Question number 1 is **compulsory**. Attempt any **four** questions from the remaining. Assume suitable data wherever necessary and state it clearly. Use of calculator is allowed.

1. Choose the correct answer from the given alternatives.

 $7 \times 2 = 14$

- (i) The brickwork is measured in sq.m., instead of cubic metres, in the case of
 - (a) Honeycomb brickwork
 - (b) B/W in lime
 - (c) Reinforced B/W
 - (d) B/W in fire-places



- (ii) The most reliable estimate is
 - (a) Plinth area estimate
 - (b) Preliminary estimate
 - (c) Detailed estimate
 - (d) Cubic rate estimate
- (iii) According of Bureau of Indian Standards (BIS), in method of measurement, the order is in sequence
 - (a) length, width and height
 - (b) width, height and length
 - (c) height, length and width
- (d) None of these
- (iv) For plastering the exposed brick walls, the cement sand mortar should be
 - (a) 1:6
 - (b) 1:4
- - (d) 1:2
 - (v) Prismoidal formula for calculation of earthwork is

(a)
$$V = \frac{1}{6} (A_1 + 4A_m + A_2)$$

(b)
$$V = \frac{1}{3} (2A_1 + A_m + 4A_2)$$

(c)
$$V = \frac{1}{3} (A_1 + 4A_2 + A_m)$$

(d)
$$V = \frac{1}{6} (A_m + 4A_1 + A_2)$$

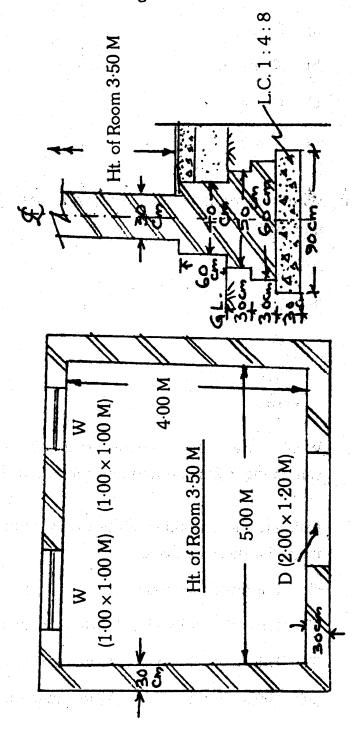
The projections of head or sill of a door or window

(vi)

		frame are called	
		(a) Posts	
		(b) Transom	
		(c) Horns	
		(d) Chocks	
	(vii)	What percentage of estimated cost is security	•
		money?	
		(a) 1%	
		(b) 2%	
		(c) 5%	
		(d) 10%	
2.	(a)	What are the various methods of building estimating? Explain any one method in brief.	4
-	/b\	Estimate the quantities of the following items of work	
	(b)	Estimate the quantities of the following items of work from the given drawing :	10
		(i) Earthwork in excavation	
	نعر ا	(ii) Lime Concrete (1 : 4 : 8) in foundation	
		(iii) Brickwork 1: 6 in CM in steps upto plinth	
		(iv) Brickwork 1: 6 in CM in superstructure	



(v) 12 mm thick cement plaster — Inside and Pointing Outside



- wording her would box it?



3 .	Calculate the quantity of earthwork for 300 m length for a			
	portion of road in cutting, the height of the banks at tw	10		
	ends being 1.10 m and 1.50 m. The formation width			
	4.00 m and side slope is 2:1 (Horz: Vert).			

Solve the question by any **two** methods from the following: $2 \times 7 = 14$

- (i) Average cross-sectional area method
- (ii) Mid-sectional area method
- (iii) Prismoidal formula method
- **4.** Prepare the analysis of rates for any **two** of the following items of works: $2 \times 7 = 14$
 - (a) 1:5:10 cement concrete in foundation
 - (b) second class brickwork in superstructure
 - (c) 1:2 flush pointing in cement mortar of the particular of the p
 - (d) RCC 1:2:4 in beams and lintels
- 5. Write down detailed specifications of any **two** items of the following work: $2 \times 7 = 14$
 - (a) White washing and colour washing
 - (b) First class brickwork 1: 6 CM in superstructure
 - (c) Sal wood work in door frame and shutters
 - (d) Stone masonry works in walls



6. Differentiate any four of the following:

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

- (a) Tender and Contract
- (b) Minor work and Petty work
- (c) Security money and Earnest money
- (d) Colour washing and Distempering
- (e) Spoil bank and Borrow pit
- (f) Lump sum contract and Percentage rate contract
- 7. Write short notes on any four of the following: 4>
 - (a) Glazed doors and windows
 - (b) Underwater concreting
 - (c) Lift and lead in earthwork
 - (d) Muster Roll
 - (e) Technical sanction
 - (f) Deposit works the first three deposits works the second secon