

B.Tech. CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

00576

June, 2016

BICE-010 : QUANTITY SURVEYING AND COSTING

Time : 3 hours

Maximum Marks : 70

Note : *Question no. 1 is compulsory. Attempt any six from the remaining questions. Use of non-programmable scientific calculators is permitted.*

1. Write down the units of measurement for the following items : $10 \times 1 = 10$
- (a) Preliminaries
 - (b) Excavation
 - (c) P.C.C. work
 - (d) R.C.C. slab (up to 15 cm thick)
 - (e) Brickwork
 - (f) Cast-iron pipes
 - (g) Stonework
 - (h) Frames for doors and windows
 - (i) Plastering
 - (j) Pointing

2. Differentiate between preliminary and detailed estimates. Explain their importance with respect to the purpose, giving examples. 10

3. What are the various factors involved in the preparation of the rate of an item ? Discuss in detail. 10

4. Write short notes on the following : $4 \times 2 \frac{1}{2} = 10$
 - (a) Rent fixation of buildings
 - (b) Plinth area rate
 - (c) Circulation area
 - (d) Dual rate interest

5. Describe, in brief, the general specifications for a 1st class building. 10

6. A newly constructed building stands on a plot costing ₹ 60,000. The construction cost of the building is ₹ 2,00,000 and the estimated life of the building is 66 years. The investor desires to get 8% return on the construction and 5% return on the land cost. Assuming annual repairs to be at 0.5% of the cost of construction and other outgoings at 30% of the gross rent, calculate the annual rent that will have to be charged for the building. The annual installment of the sinking fund for a life of 66 years of the building at 3% may be taken as 0.5 paisa/rupee. 10

7. Describe the Central line method of building estimate with a neat sketch for a two-storey residential building of 2000 sq.ft. 10

8. Calculate the volume of earthwork using Prismoidal method for a proposed road with the following details : 10

Formation width = 10 m

Side slope in filling and cutting = 2(H) : 1(V) and
1.5(H) : 1(V), respectively

Formation level is 108.00 m at 0 chainage.

Road has no slope in longitudinal direction.

Chainage (m)	G.L.(m)
0	107.20
20	107.90
40	108.00
60	108.80
80	109.00
100	110.80
120	109.10

9. Differentiate between measurement sheet and abstract sheet and also discuss their significance. Explain with an example. 10
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