

TED (15/19) -4013
(Revision- 2015/19)

A21-02305

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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE – APRIL -2021.

QUANTITY SURVEYING-I

(Maximum Marks : 75)

[Time : 2.15 hours]

PART-A

Marks

I. Answer **any three** questions in one or two sentences. Each question carries 2 marks.

1. List the requirements of a quantity surveyor.
2. List the two methods for quantity estimation.
3. Define abstract of estimate.
4. Differentiate between lead and lift.
5. Define standard data book.

(3x2=6)

PART - B

II Answer **any four** of the following questions . Each question carries 6 marks.

1. Explain any three types of estimates.
2. List the duties of a quantity surveyor.
3. Briefly explain plinth area method of approximate estimation.
4. Explain the methods of taking out quantities.
5. How is detailed estimate prepared?
6. List any five general rules for taking measurements.
7. What is specification? Explain the types of specifications.

[4x6 =24]

PART - C

(Answer **any of the three units** from the following. Each full question carries 15 marks)

UNIT I

III (a) What are the requirements to prepare an estimate?

(5)

- (b) Prepare a preliminary estimate of a building project with total plinth area of 1500m^2 . Given that plinth area rate is Rs.950/ m^2 . Extra for special architectural treatment is $1\frac{1}{2}\%$ of building cost. Extra for water supply and sanitary installations is 5% of building cost. Extra for internal installations is 14% of building cost. Extra for services is 6% of building cost. Contingencies are 3% and supervision charges are 8% of total cost. (10)

OR

- IV (a) Differentiate between supplementary estimate and revised estimate. (5)
- (b) A road embankment has the following data:

Chainage (m)	0	30	60	90	120
Ground level (m)	131.75	130.96	132.6	133.35	133.5

- Calculate the volume of earth work required by using trapezoidal rule and prismoidal rule. Given the formation level is 134.00 m at all chainages and side slopes of the embankment are 2:1 and the top width is 15m. (10)

UNIT- II

- V From figure 1, estimate the quantities of following items.
- (a) Earthwork in excavation (5)
 - (b) Lime concrete in foundation. (5)
 - (c) 2.5 cm damp proof course (5)

OR

- VI (a) From figure1, estimate the quantity of brick work in lime mortar in foundation and plinth. (9)
- (b) From figure 2, estimate the quantities of
- (i)Earthwork in excavation (3)
 - (ii)2cm damp proof course (3)

UNIT- III

VII For the hexagonal room shown in figure 2, estimate the quantities of following items.

- (a) First class brick work in foundation and plinth in lime mortar. (8)
- (b) 12mm cement plastering 1:6 inside and outside walls. (7)

OR

VIII For the hexagonal room shown in figure 2, estimate the quantities of following items.

- (a) First class brick work in superstructure in lime mortar. (9)
- (b) RCC roof slab (3)
- (c) Lime concrete in roof terracing. (3)

UNIT – IV

IX (a) Work out the rate per unit of lime concrete in foundation. Take 10m^3

Materials:

10m^3	Brick ballast first class(40mm gauge)	@ Rs.400/ m^3
1.6m^3	White lime	@Rs.700/ m^3
3.2m^3	Surkhi	@ Rs.350/ m^3

Labours:

0.5 nos	Mistri	@Rs.160/day	
1 no	Mason	@Rs.150/day	
12 nos	Mazdoor	@Rs.80/day	
12 nos	Boy or women coolie	@Rs.70/day	
2 nos	Bhishti	@Rs.70/day	
LS	Miscellaneous things	@Rs.45	(10)

(b) Differentiate between drawing and specification. (5)

X. (a) Work out the rate per cu.m of first class brick work in super structure with 1:6 cement sand mortar. Take 10m^3

Materials:

5000 no.s	Brick first class	@Rs.2000/1000 no.s
0.45 m^3	Cement(13.5 bags)	@Rs.6325 m^3
2.7 m^3	Sand (local)	@Rs.400/ m^3

Labours:

0.5 nos	Mistri(Head mason)	@Rs.160/day	
10 nos.	Mason	@Rs.150/day	
7 nos	Mazdoor	@Rs.80/day	
10 nos	Boy or women coolie	@Rs.70/day	
2 nos	Bhishti	@Rs.70/day	
LS	Scaffolding	@Rs.130 LS	
LS	Sundries, T.and P.etc.	@Rs.35 LS	(10)

(b) What are the purposes of doing rate analysis? (5)

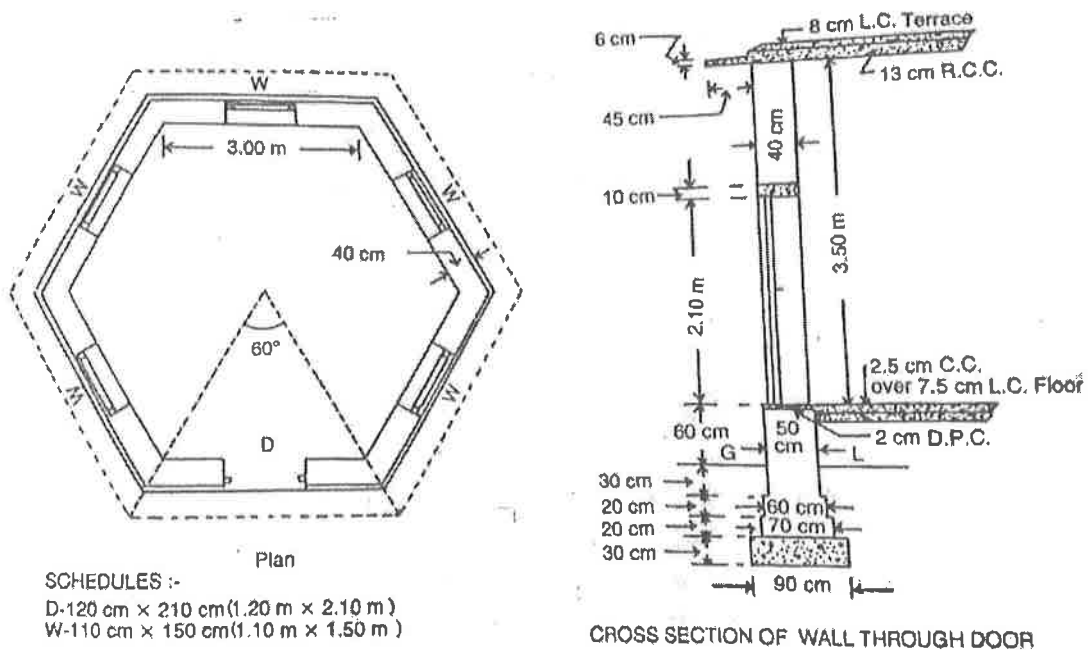


Figure 2 :HEXAGONAL ROOM

