TED (15) 4013
(Revision - 2015)

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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2020

QUANTITY SURVEYING-I

[Maximum Marks: 75] [Time: 2.15 Hours]

PART-A

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

I. 1. Define the term quantity surveying.

2. Define the term lead and lift.

3. In long wall and short wall method how the length is calculated.

4. Write the units of the following items of work

(i) Plastering of wall (ii) Door frame.

5. What is conveyance charge? (3 x 2 = 6)

PART-B

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

II 1. List the essential requirements of a quantity surveyer.

2. Calculate the quantity of earth works for a portion of road on a uniform ground with the following data by a prismoidal formula method. Assume there is no transverse slope.

Length of road = 20m; Height of bank at one end = 2m.
Height of bank at other end = 3m; Formation width = 10m,
Side slope = 2:1.

3. Calculate the quantity of wood works required for doors and windows frame for the building in figure. Size of frame (8 X 12)cm.

4. Determine the quantity of RCC works for the building in given fig.

5. Estimate the quantity of RCC works for an RCC rectangular water tank with inner dimension 4m x 2m x 1.2m and wall thickness 15cm. Thickness of floor slab 20cm and roof slab 10cm.

6. Determine the quantity of earth works for a masonry well of 200cm inner diameter 4m deep. Thickness of masonry is 30cm.

7. Distinguish between standard data book and Schedule of rate. (4 x 6 = 24)

PART-C

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

UNIT – I

III (a) A single room building is having 8.6m x 6.2m internal dimension with 20cm thick wall. The plinth projection is 5cm. Find the approximate cost of the building if the plinth area rate is Rs.12000 per sqm. (6)

(b) The details of a road embankment are as follows. Formation width 10m, side slope 1.5:1, there is no transverse slope for the ground. Find the volume by Trapezoidal rule.

Distance	0	30	60	90	120	150
RL of ground	61.20	61.50	62.30	62.70	62.50	63.20
RL of formation	60.00	Upward gradient 1 in 150				

(9)

OR

IV (a) Calculate the quantity of earth works for a portion of road on a uniform ground with the following data by average depth formula method. Assume there is no transverse slope.

Length of road = 200m; Height of bank at one end = 2m.

Height of bank at other end = 3m; Formation width = 10m,

Side slope = 2:1. (6)

(b) A person is to construct a building of plinth area equal to 120sq.m on a plot at a cost of Rs.6,00,000. The height of the building from ground level to the top of roof is 3.2m. Determine the cost of construction of a similar type of building of plinth area 150 sq.m in the locality based on (a) Plinth area rate and (b) Cubic content rate. (9)

UNIT – II

V (a) Calculate the quantity of earth works for the building shown in fig. by out to out & In to In method. (6)

(b) Calculate the quantity of brick masonry required in superstructure wall for the building shown in fig. (9)

OR

VI (a) Calculate the quantity of cement concrete 1:4:8 in foundation for the building shown in fig. by out to out & In to In method. (6)

(b) Compute the quantity of R R masonry in CM 1:6 for the building shown in fig. (9)

UNIT- III

VII Calculate the quantity of plastering with C M 1:4 for inside and outside the wall for the building shown in fig. (15)

OR

VIII (a) Compute the quantity of ceiling works with C M 1:3 for the building shown in fig. (6)

(b) Calculate the quantity of steel required for the RCC 1:2:4 for the side wall, roof slab and floor slab of an RCC ground water tank having inside dimension 4m x 3m x 1.6m. The floor slab and roof slab projection from the side wall is 10cm. Thickness of wall is 15cm, thickness of floor slab and roof slab are 20cm and 10cm. Take the quantity of steel 1%. (9)

UNIT - IV

IX (a) Define Lump Sum items. (3)

(b) Work out the rate for 1st class brickwork in C M 1:6 for superstructure wall.

Materials	Labours
500 bricks @ Rs.8600/1000Nos	0.5 Nos. Head mason @ Rs.487/-
$0.3m^3$ dry sand @ Rs.800/cu.m	0.8 Nos. Mason @ Rs.448/-
75kg cement @ Rs. 430/bag	1.5 Mazdoor @ Rs.368/-
	0.2 Bhisti @ Rs. 407/-
	Sundries, T&P – L S Rs. 173/-

(12)

OR

X (a) Define cost of materials at source and at site. (3)

(b) Work out the rate per unit of RR masonry in foundation and plinth in C M 1:6.

Materials.

Stone (undressed) – 1.25 cu.m @ Rs. 1500/1cum.

$0.36m^3$ dry sand @ Rs. 800/cu.m

0.06cu.m cement @ Rs.430/bag.

Labours.

0.05 Nos. Head mason @ Rs.487/-

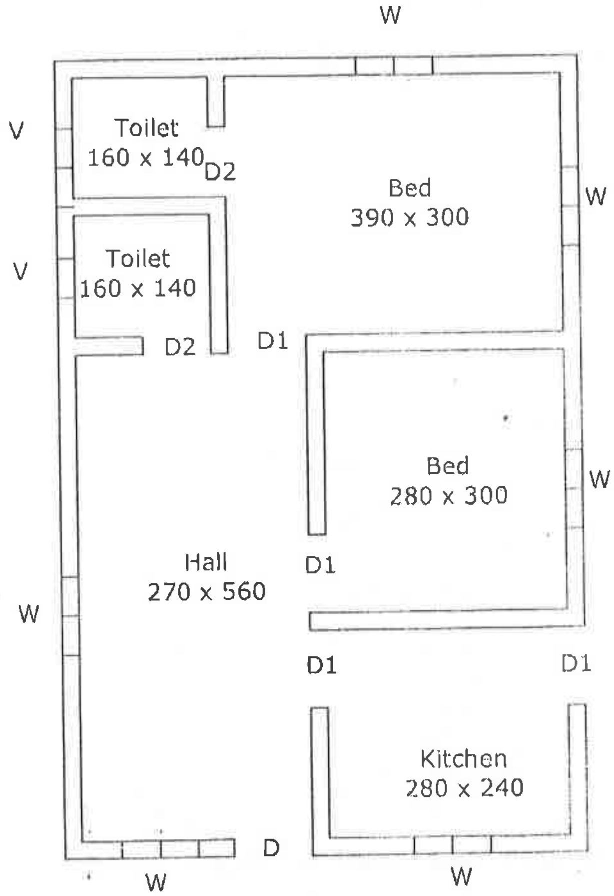
1 Nos. Mason @ Rs.448/-

1.75 Mazdoor @ Rs.368/-

0.15 Bhisti @ Rs. 407/-

Sundries, T&P – L S Rs.173/-

Add $1^{1/2}$ % water charge and 10% CP. (12)



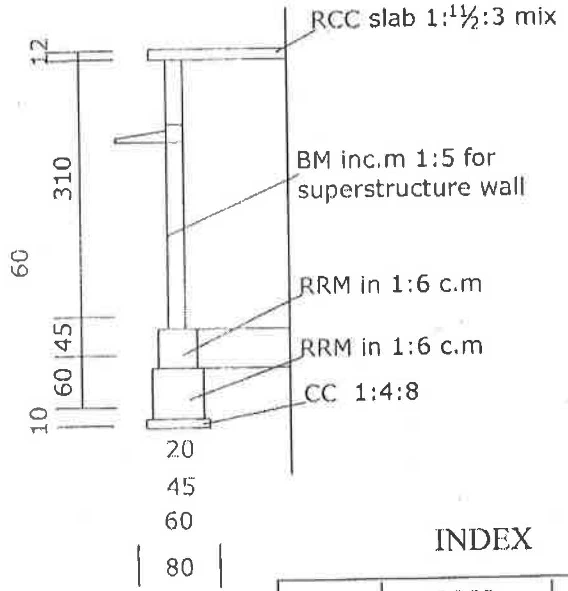


Fig::

INDEX

D	DOOR	100X200
D1	DOOR	90X200
D2	DOOR	80X180
W	WINDOW	90X140
V	VENTILATOR	45X30