TED (15/19)4013

(Revision – 2015/19)

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Reg. No…………………

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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER - 2024

QUANTITY SURVEYING - I

[Maximum Marks: **100**]   [Time: **3** Hours]

PART-A

[Maximum Marks: **10**]

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

1. Define Contingencies.
2. Give units of measurement of (i). Painting (ii). Pointing.
3. Define lead.
4. List any two rules for measurement of work.
5. Define rate analysis.   (5 x 2 = 10)

PART-B

[Maximum Marks: **30**]

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

1. Differentiate revised estimate and supplementary estimate.
2. Explain quantity surveying. List any four duties of a quantity surveyor
3. Calculate the quantity of brick work and plastering required for a compound wall of wall thickness 20cm, height 1.8m and length 15m.
4. Compare long wall short wall method and center line method of taking out quantities.
5. List the factors affecting rate of an item.
6. Compute the quantity of materials required for $1m^3$ Plain cement concrete 1:4:8.
7. Compute the quantity of concrete for the walls of a rectangular water tank of inside dimension 3m x2m having a wall thickness 15cm and height of 2m.   (5 x 6 = 30)

PART-C

[Maximum Marks: **60**]

(Answer **one** full question from each Unit. Each full question carries **15** marks)

UNIT – I

III.   The details of road embankment are as follows, formation width is 10m side slope 2:1 RL of formation is 63m at chainage 0 and is having a uniform upward gradient of 1 in 200. Compute the quantity of earth work using trapezoidal rule. Assume length of chain as 30m.

Chainage in m	0	1	2	3	4	5	6	7	8
Ground level	62	62.8	62.6	63.1	62.8	63.2	63.8	63.6	63.8

(15)

OR

IV. a. A building is having a plinth area of 2500 sqft. Compute the approximate cost of the building assuming the following data:

    i. Plinth area rate = Rs.2500/sqft

    ii. Additional cost for electrification = 6% of building cost

    iii. Additional cost for Water supply and sanitary work = 5 % of building cost

    iv. Additional cost for Architectural treatment= 4% of building cost

    v. Unforeseen items = 2%

    vi. Supervision charges - 2% (8)

b. The area within different contours of a reservoir site is given below, compute the capacity of reservoir.

Contour in m	100	102	104	106	108	110	112
Area in sqm	500	900	1300	1780	2050	2250	2900

(7)

UNIT – II

V. For the building shown in figure 1 calculate the quantities of

a. Plain cement concrete in foundation. (7)

b. Brick work in super structure. (8)

OR

VI. For the building in figure 1 calculate quantities of

a. Earth work in excavation. (7)

b. RCC for Roof slab and sunshade. (8)

UNIT- III

VII. For the building in figure 1 calculate the quantity of

a. Flooring using vitrified tiles. (7)

b. Painting of walls inside and outside. (8)

OR

VIII. For the building in figure 1 calculate the quantities of

a. Plastering of ceiling. (7)

b. Wood work for door and window frames assume size of frame as 10cmx7.5cm. (8)

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UNIT - IV

IX.   a. Explain the purpose of rate analysis.   (6)

     b. Workout the rate per unit for first class brick work in cement mortar 1:6 for the superstructure from the following data. Add profit to contractor.

Materials	500 brick@ Rs.12000/1000nos
	0.3 m^3 Dry sand @ Rs.2500/ m^3
	75 kg cement@Rs.8000/ton

Labour	0.5 Head Mason@Rs.l200/each /day
	0.8 Mason@Rs.1000/each/day
	1.5 Mazdoor @Rs.800/each/day
	0.2 Bhishti @ Rs.750/each/day

Sundries LS Rs.500   (9)

OR

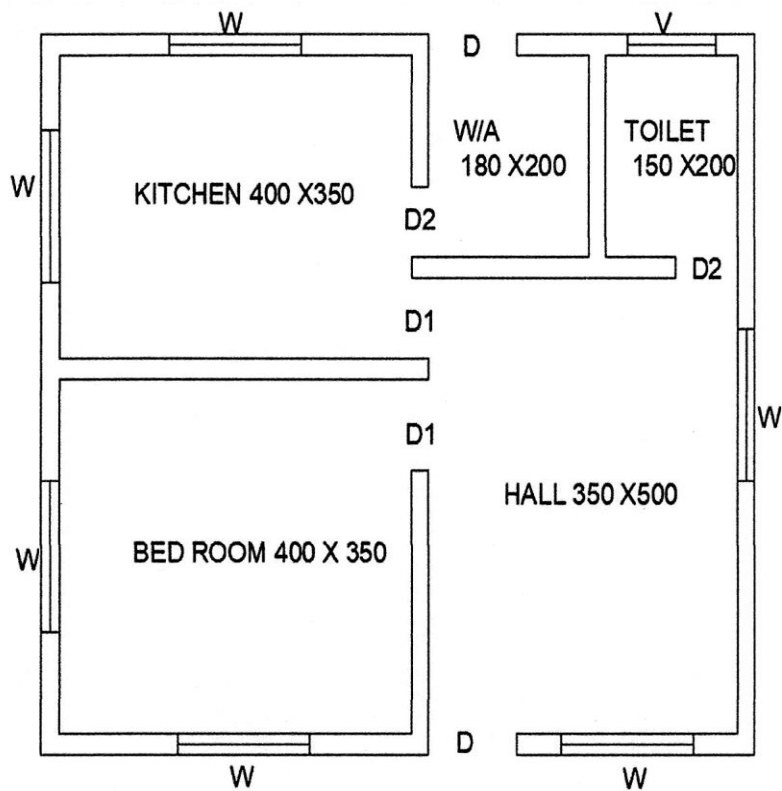X.   Compute the rate per unit of RR Masonry in CM 1:6

Materials	1m^3 Rubble @ Rs 2500/ m^3
	0.3 m^3 Dry sand @ Rs.2500/ m^3
	72 kg cement@Rs.8000/ton

Labour	0.7 Mason @Rs.1000/each/day
	0.35 Mazdoor @Rs.800/each/day
	0.7 Bhishti @RS750/each/day

Conveyance

Name of material	Distance	Rate/unit/km
Rubble	20km	30
Sand	15km	25
Cement	10Km	30

(15)

JOINERY DETAILS	
D	100 X210
D1	90 X210
D2	70 X 210
W	150 X 150
V	100 X50
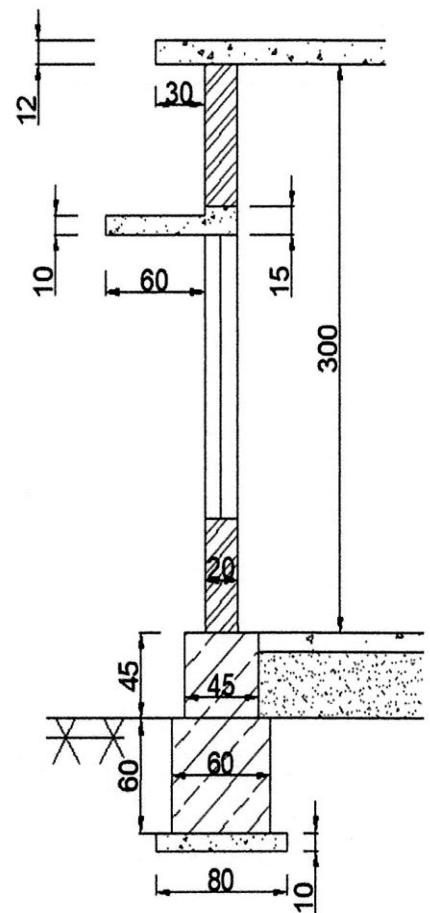
All dimensions in CM

Figure 1