TED (15) – 4013

(REVISION — 2015)

Reg. No.....

Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2017

QUANTITY SURVEYING – I

[*Time* : 3 hours

(Maximum marks : 100)

[*Note*:– Figure on 4th Page.]

PART — A

(Maximum marks : 10)

Marks

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

1. Define quantity surveying.
2. Differentiate sundries and lump-sum.
3. List two types of taking out quantities.
4. State standard schedule of rates.
5. Show the form of abstract of estimate. (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. State revised estimate and in what circumstances this is prepared ?
2. Cross-section of earthwork of a road in banking is the form of a trapezium of depth d, Formation width B and side slope S : 1. Compute the expression for area of cross section with a sketch.
3. Determine the quantity of woodwork for shutters from the figure -1. The size of frame is 80 × 120mm.
4. Compute the quantity of plain cement concrete from the figure -1.
5. Determine the quantity of metal required for 4.2 m wide macadam road for one kilometer Length for one layer of 8cm compacted thickness.
6. Determine the quantity of underside plastering of roof slab in cement mortar 1:3.
7. List any four general rules for taking mesurement of works. (5×6 = 30)

Marks

PART -- C

(Maximum marks : 60)

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

UNIT -- I

III (a) Explain plinth area estimate and cubical content estimate. 7

(b) Prepare a preliminary estimate of building with a plinth area of 150m², plinth rate is R_s 2000/m², for architectural treatment is 1%, 8% forwater supply and sanitary installation, 8% for electrification, 2% for supervision charge. 8

OR

IV (a) List the duties and requirements of quantity surveyor. 7

(b) The details of a road embankment are as follows. The formation width is 10m and side slope 2:1. The formation level is 42m. There is no transverse slope. Compute the quantity of earthwork. Using trapezoidal and prismoidal rule.

Ground level	36.5	38.8	40.00	40.8	41.00
Chainage	0.00	30	60	90	120

8

UNIT -- II

V Determine the quantity of following items from the given figure -1.

(a) Random rubble masonry in cement mortar 1:6 for foundation and basement. 7

(b) Reinforced cement concrete for roof and lintel. 8

OR

VI (a) Determine the quantity of earthwork excavation in ordinary soil from figure - 1. 7

(b) Compute the quantity of brickwork in cement mortar 1: 6 from figure - 1. 8

UNIT -- III

VII (a) Compute the quantity of flooring with marble slabs 40mm thick over a bed of 1:4:8 cement concrete and slabs set in cement mortar from figure - 1. 7

(b) Determine the quantity of woodwork for frames of doors and windows from figure - 1. 8

OR

VIII (a) Determine the quantity of plastering both inside and outside from figure - 1. 7

(b) Determine the quantity of painting doors and windows from figure - 1. 8

UNIT -- IV

IX (a) Find the quantities of ingredients of 1m³ of cement concrete 1:1½:3. 7

Marks

(b) Compute the rate per m^3 of cement concrete 1:4:8 40mm broken stone. Add 10% profit to the contractor.

Materials.

0.95m^3 broken stone	@ ₹ 2,500/m^3
0.475 m^3 sand	@ ₹ 3,000/m^3
0.115m^3 cement	@ ₹ 3,800/ton

Labour

0.06 mason 1st class	@ ₹ 850/each/day.
0.14 mason 2nd class	@ ₹ 650/each/day.
1.8 man	@ ₹ 600/each/day.
1.4 woman	@ ₹ 550/each/day.

8

OR

X (a) Discuss conveyance charge, labour cost and lead statement. 7

(b) The detailed quantities of items are given below. Compute the total cost of work in an abstract estimate form.

1.	Earthwork excavation	11m^3 @ ₹ 400/m^3
2.	Foundation and basement	4.1m^3 @ ₹ 900/m^3
3.	Superstructure	12.6m^3 @ ₹ 1500/m^3
4.	Doors and windows	1.1m^3 @ ₹ 5000/m^3
5.	Plastering	171m^3 @ ₹ 250/m^2
6.	Colour washing	171m^2 @ 250/m^2
7.	Sanitary and electrification, Water supply	15% of cost
8.	Unforeseen items	2% of cost.

8

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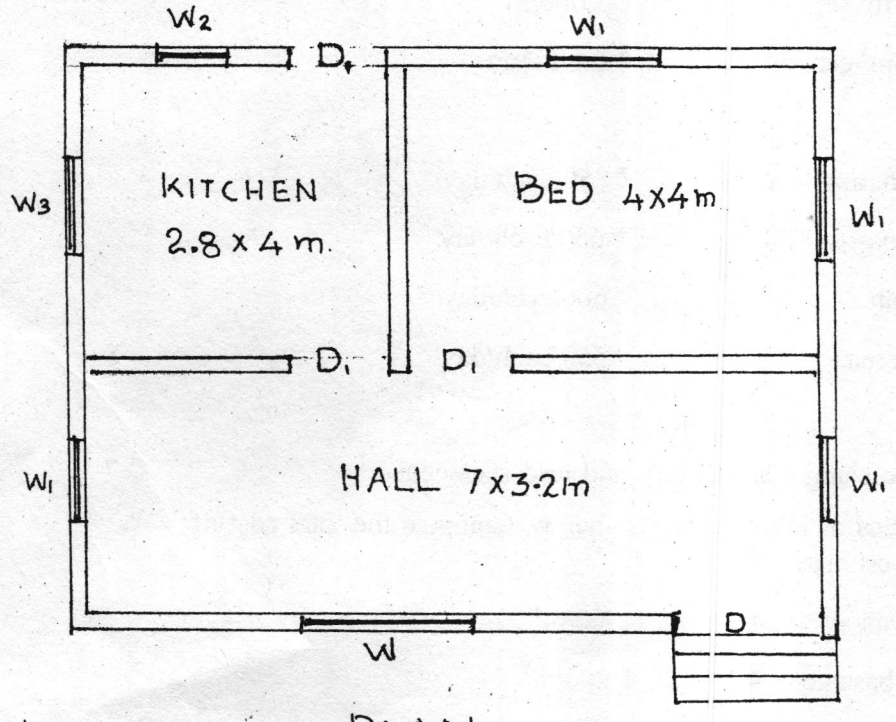
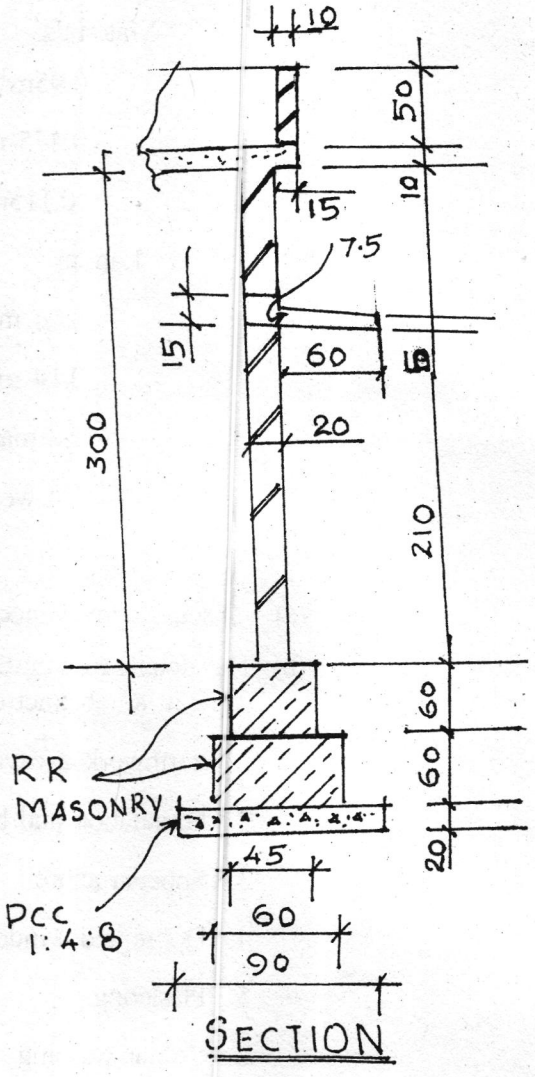


PLAN



SECTION

SPECIFICATION

DOOR D:	100 x 210 FULLY PANELED
D1	90 x 210
WINDOW W	200 x 150 FULLY GLAZED
W1	150 x 150
W2	100 x 150
W3	150 x 130.

2. LINTEL THROUGOUT WALL

DOOR FRAME - 80mm x 120mm.

WINDOW FRAME - 80mm x 100mm.

INSIDE DIMENSIONS ARE IN 'M' - PLAN

DIMENSIONS AREIN 'CM' - SECTION

MISSING DATA SUITABLY ASSUMED

FIG-1