TED (10)–3026 Reg. No. .....

(REVISION—2010) Signature .....

FOURTH/SIXTH SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/ TECHNOLOGY—MARCH, 2014

QUANTITY SURVEYING – I

(For IV[th] Semester CE, EN and WR and for VI[th] Semester AR)

[*Time* : 3 hours

(Maximum marks : 100)

[*Note* : 1. Missing data if any may be suitably assumed.
2. Quantities should be worked out in standard form.
3. Sketches on 4[th] 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. State the different methods of approximate estimate.
3. What is meant by wood work wrought and put up ?
4. State the coefficient of painting fully panelled window and fully glazed window.
5. Give the standard unit of the following :
   (i) Earth work excavation (iii) Wood work wrought and put up
   (ii) Plastering walls (iv) D.P.C with cement concrete (5×2=10)

PART—B

(Maximum marks : 30)

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

1. What are the essential requirements of a quantity surveyor ?
2. Estimate the quantity of brick work for parapet walls and plastering it by inside and outside with C.M 1:4 for the building in figure I.
3. Calculate the materials required for preparing 5 cubic metre of cement concrete using 20 mm metal.
4. Determine the quantity of fully panelled shutters for the doors and fully glazed shutters for windows for the building in figure I.
5. Determine the quantity of plinth filling for the building in figure I.
6. Explain standard data and schedule of rates.
7. State trapezoidal formula and prismoidal formula and compare them. (5×6=30)

Marks

PART—C

(Maximum marks : 60)

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

UNIT—I

III Prepare a preliminary estimate of a building with a total plinth area of 1250 Sq.M. Given that :

Plinth area rate is 12000 per Sq. M.

Extra for special architectural treatment-12% of the building cost.

Extra for services-8% of building cost.

Electrification-8% of the building cost.

Supervision charges-5% of the building cost. 15

OR

IV Estimate the quantity of earthwork by prismoidal formula for a portion of a road 300 m length from the following data. The formation level at 0 chainage is 103.00 and the road is in an upward gradient of 1 IN 150. The formation width is 10 M and side slope are 1:1.5. Assume that the ground is level along the longitudinal direction. Formation width of road is 8 metre and slide slope is 2:1.

Chainage	0	30	60	90	120	150	180	210	240	270	300
R.L of ground	102.8	102.95	103.00	103.25	102.7	102.9	103.1	103.2	103.9	104.5	104.4

15

UNIT—II

V (a) Determine the quantity of earthwork for the building in figure I. 10

(b) Calculate the quantity of cement concrete 1:5:10 using 40 mm metal 75 mm for foundation for figure I. 5

OR

VI (a) Calculate the quantity of R.R. masonry for foundation and basement for the road for the building in figure I. 10

(b) Determine the quantity of C.C 1:1.5:3 for D.P.C of the above building. 5

UNIT—III

VII Calculate the quantity of RCC for roof slab, lintel and sunshade of the building given in figure I. Average thickness of sunshade is 8 cm and depth of lintel is 15 cm. 15

OR

VIII Calculate the quantity of plaster required for ceiling and bottom surface of sunshade using cement mortar as per figure I. 15

Marks

UNIT—IV

IX Work out the rate for 1 class brick work in C.M 1:8 for super structure :

Materials

500 bricks @ ₹ 2100/1000 numbers

43 kg cement @ ₹ 150/bag

0.24 cubic metre dry sand @ ₹ 600/cubic metre.

Labour

0.9 Mason @ ₹ 225/each/day

0.35 Man @ ₹ 150/each/day

1.20 Women @ ₹ 150/each/day. 15

OR

X Work out the rate per unit of R.C.C. 1:1.5:3 using 20 mm broken stone :

Materials

0.009 cubic metre broken stone @ ₹ 700/cubic metre.

0.0045 cubic metre sand @ ₹ 1750/cubic metre

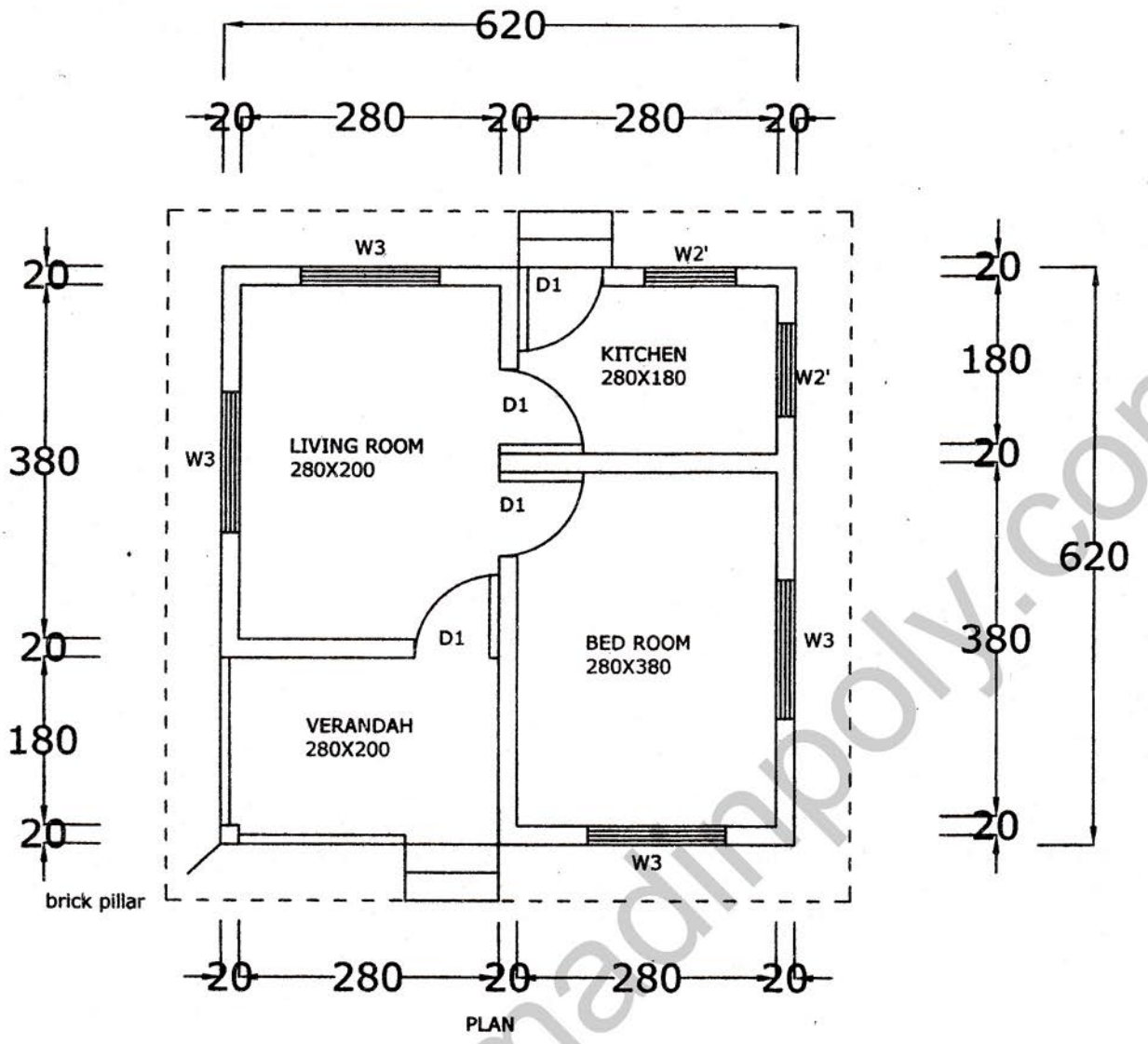
43 kg cement @ ₹ 4700/tonne

Labour

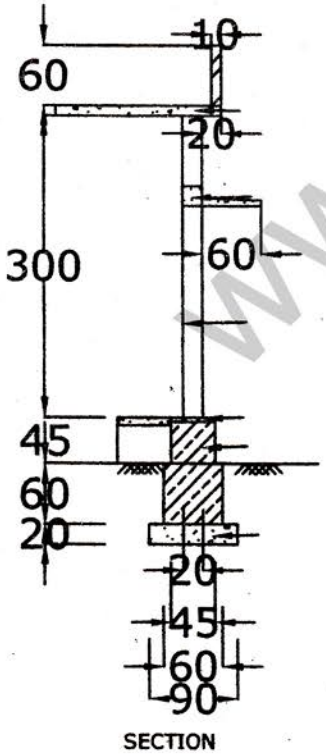
0.002 Mason @ ₹ 325/each

0.01 Man @ ₹ 240/each

0.035 Women @ ₹ 240/each. 15



PLAN



SECTION

RCC ROOF SLAB 1:1.5:3,
10 cm THICK

RRC LINTEL &SUNSHADE
1:1.5:3

BRICK MASONRY IN CM 1:6
FOR SUPERSTURCTURE

40mm THICK DPC WITH CC 1:1.5:3
RR MASONRY IN CM 1:8
FOR FOUNDATION & BASEMENT

PCC 1:4:8 FOR FOUNDATION

D1	DOOR (fully panelled)	90X210
W3	WINDOW	150X150
W2'	WINDOW	100X100

STEP

WIDTH	100cm
TREAD	30cm
RISE	15cm
PILLAR	20X20cm

Provide 15 cm thick lintel over all walls

FIG-I