

TED (10) 3026
(Revision-2010)

N20-R01952

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

QUANTITY SURVEYING-I

[Maximum marks: 100]

(Time: 3 Hours)

- [Note: 1. Missing data may be suitably assumed.
2. Quantities should be worked out in standard form.
3. Sketches accompanied.]

PART – A

[Maximum marks: 10]

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

- I. (1). What is meant by Work charged establishment?
(2). State the units of the following items of works.
(i). Earthwork excavation. (ii). Brick masonry. (iii). Plastering (iv). RCC
(3). Name any two methods of taking out measurements.
(4). What is analysis of rate?
(5). Define Abstract Estimate. (5 x 2 = 10)

PART – B

[Maximum marks: 30]

(Answer any *three* of the following questions. Each question carries 10 marks)

- II. (1). Briefly explain about Revised Estimate.
(2). What are the uses of 'Standard Data Book' and 'Schedule of Rates'?
(3). Neatly tabulate formats of detailed estimate and abstract estimate separately.
(4). Calculate the quantity of metal required for laying in two layers each 8 cm thick for a 4m wide road in one kilometre length.
(5). Write down any six types of Estimate.
(6). A semi-circular arch has a span of 2m, if thickness of the arch is 30 cm and width 60 cm. Calculate the quantity of arch masonry.

(7). For the specification shown in figure – 1, Calculate the quantity of hipped rafter. The rise of hipped roof is 1/3 of span. Dimensions are in mm, room size 6500 x 4500 mm.

(6 x 5 = 30)

PART – C

[Maximum marks: 60]

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

UNIT –I

III. Reduced Level of ground along the centre line of a proposed road from chainage 10 to chainage 20 is given below. The formation level at the 10th chainage is 107 and the road is downward gradient of 1 in 150 up to the chainage 14 and then the gradient changes to 1 in 100 downward. Formation width of road is 10 meter and side slopes of banking are 2 : 1 (Horizontal : Vertical). Length of the chain is 30 meter. Draw the Longitudinal section of the road and a typical cross-section and prepare an estimate of earthwork at the rate of Rs.275.00 per % cu.m.

Chainage	10	11	12	13	14	15	16	17	18	19	20
RL of ground	105.00	105.60	105.44	105.90	105.42	104.30	105.00	104.10	104.62	104.00	103.30
RL of Formation	107.00										
Gradient	Down gradient 1 in 150					Down gradient 1 in 100					

(15)

OR

IV. (a). Calculate the quantity of earthwork by Prismoidal formula for 200 m length for a portion of a road in a uniform ground. The heights of banks at the two ends being 1.00m and 1.60m. the formation width is 10m and side slopes 2:1 (Horizontal: Vertical). Assume that there is no transverse slope.

(9)

(b). Write short notes on (i). Lump sum (ii). Contingencies

(6)

UNIT-II

V. (a). The Areas with Contours at the site of a proposed reservoir are given below.

Find reservoir capacity using Trapezoidal rule.

Contour in m	101	102	103	104	105	106	107
Area in m ²	528	910	1500	1750	2100	2800	3100

(9)

(b). Explain the Centre line method for taking out quantities.

(6)

OR

VI. Estimate from Fig:-2, Two Roomed building the quantities of following items by

Long wall & Short wall method.

- (i). Earthwork in excavation in foundation.
- (ii). 1st class Brickwork in lime motor in superstructure.
- (iii). 2.5cm CC Damp proof course.

(3 x 5 = 15)

UNIT-III

- VII. The plan of a building with one bed room is shown in the figure (3). Calculate the quantity of Plastering wall surface in CM 1:3, 12 mm thick with standard format. (15)

OR

- VIII. Calculate the quantity of RCC (1:2:4) required in Chajja, Lintel and roof slab as shown in figure (3). (15)

UNIT-IV

- IX. Prepare Rate per cu.m of Cement concrete 1:2:4 with graded stone chips from 20 mm down to 6mm for R.C, works excluding shuttering and reinforcement. Consider for 10 cu.m.

Particulars	Quantity	Rate
(a). Materials-stone chips	8.8cu.m	Rs.900/cu.m
Sand (coarse)	4.4 cu.m	Rs.350/cu.m
Cement	2.2 cu.m = 66 bags	Rs.180/bag
(b).Labour-Head Mason	½ No	Rs.125/E/day
Mason	3 Nos	Rs.115/E/day
Mazdoor (including 4 Bhisti)	23 Nos	Rs.80/E/day
Contingencies, T.P, etc	L.S ½ % (a+b)	L.S

(15)

OR

- X. Prepare Rate per cu.m of First class brickwork in cement motor 1:4 in superstructure, ground floor.

Particulars	Quantity	Rate
(a). Materials-Bricks	5000 Nos	Rs.2900/ % nos
Sand (medium)	2.8 cu.m	Rs.300/cu.m
Cement – 0.70 cu.m	21 bags	Rs.180/bag
Scaffolding	L.S	Rs.80
(b).Laboaur-Head Mason	½ No	Rs.125/E/day
Mason	8 Nos	Rs.115/E/day
Mazdoor (including 4 Bhisti)	16 Nos	Rs.80/E/day
Contingencies, T.P, etc	L.S ½ % (a+b)	L.S

FIGURE (1)

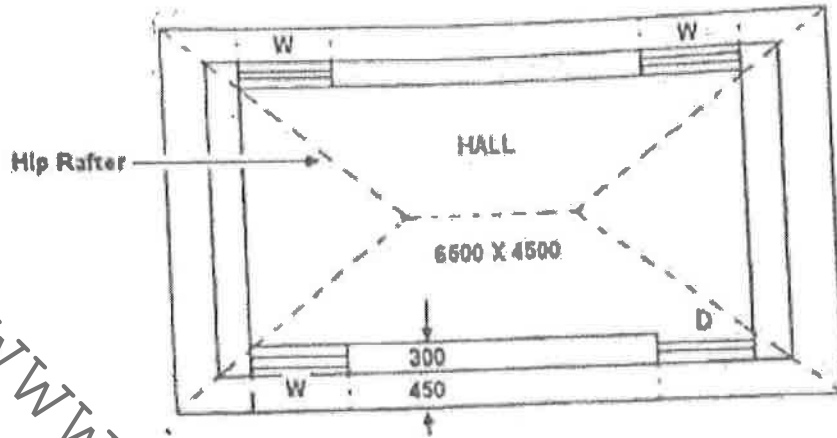


Figure: (2) TWO ROOMED BUILDING

TWO ROOMED BUILDING

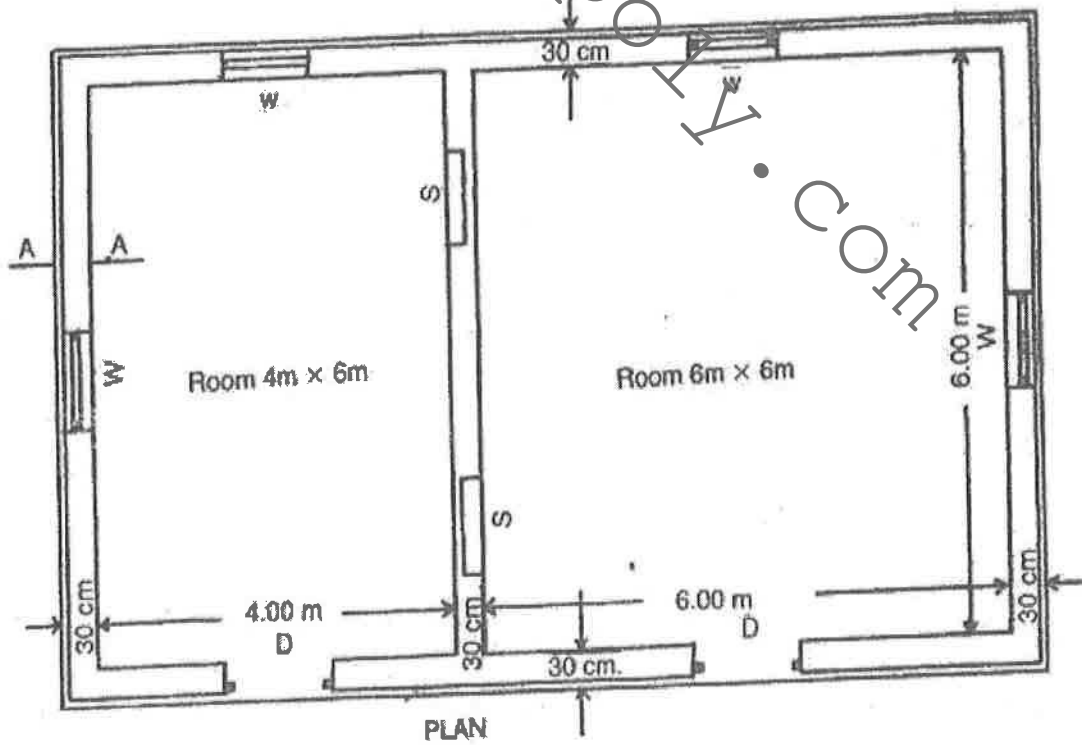


Figure:- (3) A BUILDING

