824 Register No.:

October 2018

Time – Three hours
(Maximum Marks: 75)

(Sketch 'A' and 'B' to accompany)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART – A and PART – B

(2) Answer division (a) or division (b) of each question in PART – C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.]

PART – A

1. Define revised estimate.
2. What do you mean by volume of earth work?
3. What is two level sections?
4. What is main data?
5. What is standard data book?
6. What is meant by taking off?
7. Name the various methods used to take dimensions from the drawing.
8. What is meant by squaring dimensions?

PART – B

9. Write any three duties of quantity surveyor.
10. How will you check the abstract?
11. Write short notes on carpet area method.
12. What are the different rules used to compute the area of irregular section?
13. State the expression to compute the area of cross section for a level section.
14. Give three examples for sub data.
15. Write short notes on individual wall method.
16. What is order of taking off? Explain briefly.

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PART – C

17. (a) Write down the stages in detailed estimation.

(Or)

(b) The cost of a building constructed is ₹. 4,50,000/-. The plinth area of the building is 90 m^2 and height of the building upto top of the roof from floor is 3.2 m. Work out the plinth area rate and the cubic unit rate. If a similar building of plinth area 130 m^2 is to be constructed, find the approximate cost of construction.

18. (a) The following offsets were taken at 15 m intervals from a survey line to an irregular boundary line: 3.50, 4.30, 6.75, 5.25, 7.50, 8.80, 7.90, 6.40, 4.40, 3.25. Calculate the area by trapezoidal and Simpson's rule.

(Or)

(b) The cross sectional areas of an embankment are as given below. Calculate the volume of the embankment by (i) Trapezoidal rule (ii) Simpson's rule.

Distance (m)	0	20	40	60	80	100	120
Area (m^2)	10	40	64	72	160	180	26

19. (a) Prepare data for plain cement concrete 1:4:8 in foundation using 20mm size metal- 10 m^3.

Materials and labour required:

Materials required for CM 1:4-1m^3

Materials	Quantity
Cement	360 kg
Sand	1 m^3
Mixing charges	1 m^3

Materials and labour required for PCC 1:4:8 using 20mm metal - 10m^3.

Materials	Quantity
Broken stone 20 mm	9.0 m^3
Cement mortar 1:4	4.5 m^3
Mason I class	1.80 Nos.
Mason II class	17.7 Nos.
Mazdoor IInd Class	14.1 Nos.
Vibrating charges	10 m^3

Cost of Materials and labour:

1. Cement - ₹. 6000.00/ton
2. Sand - ₹. 800.00/m^3
3. Broken stone 20mm - ₹. 600.00/m^3
4. Mason I class - ₹. 600.00 each
5. Mason II Class - ₹. 500.00 each
6. Mazdoor IInd Class - ₹. 300.00 each
7. Mixing charges - ₹. 100.00/m^3
8. Vibrating charges - ₹. 200.00/m^3

(Or)

(b) Prepare data for brick work in CM 1:5 in super structure using second class brick in-10 m^3.

Materials and labour required

Cement mortar 1:5-1m^3

Materials	Quantity
Cement	288 kg
Sand	1 m^3
Mixing charges	1 m^3

Brickwork in super structure using II class bricks in CM 1:5-10m^3

Materials	Quantity
Brick II class	5000 Nos.
Cement mortar 1:5	2.2 m^3
Mason I class	3.5 Nos.
Mason II class	10.6 Nos.
Mazdoor I category	7.1 Nos.
Mazdoor II category	21.2 Nos.

Cost of materials and labour

1. Cement - ₹. 6000.00/ton
2. Sand - ₹. 800.00/m^3
3. Brick II class - ₹. 4000.00/1000 nos.
4. Mason I class - ₹. 600.00 each
5. Mason II class - ₹. 500.00 each
6. Mazdoor I Class - ₹. 400.00 each
7. Mazdoor IInd Class - ₹. 300.00 each
8. Mixing charges - ₹. 100.00/m^3

20. Take out the quantities of the following item of work involved in the construction of a small industrial building with A.C sheet roof on steel trusses shown in Sketch 'A' by trade system.

(a) (i) Earthwork excavation.
(ii) RCC 1:2:4 for footing and plinth beam.

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(Or)

(b) (i) Brick work in CM 1:4 for walls.
(ii) Earth filling in basement.

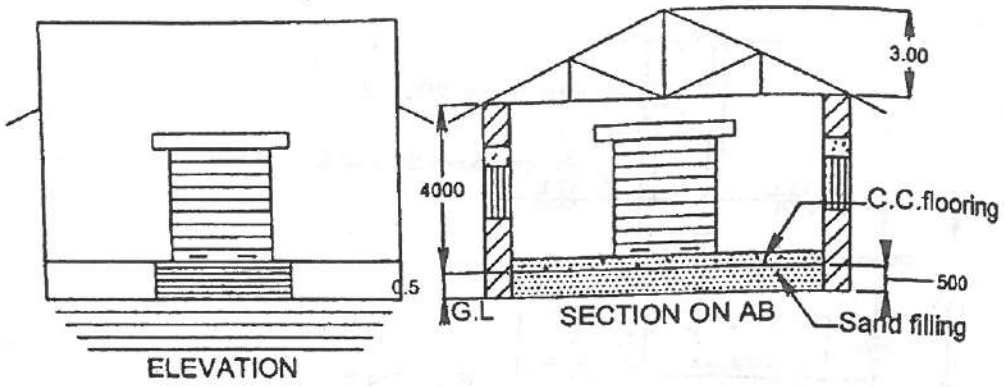
21. Take out the quantities of the following item of work involved in the construction of a residential building with two rooms with RCC flat roof shown in Sketch 'B' by group system.

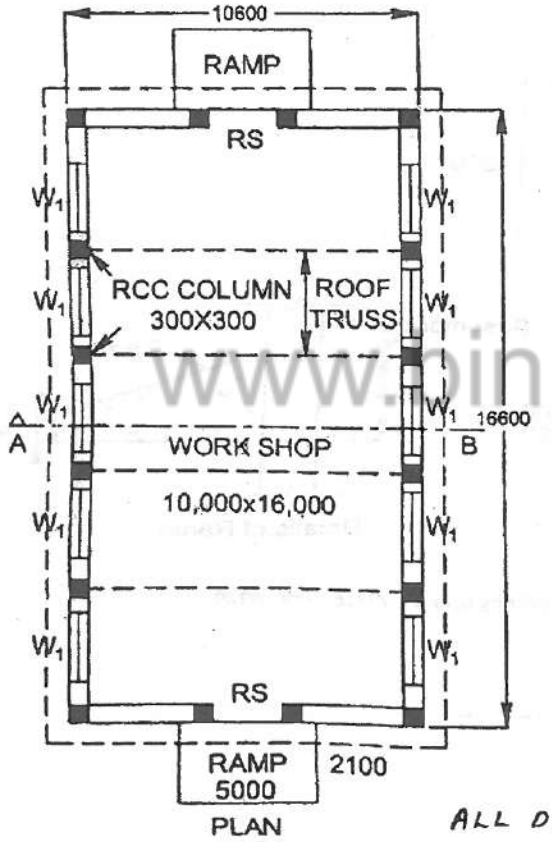
(a) PCC 1:5:10 in foundation.

(Or)

(b) RR masonry in CM 1:5 for foundation and basement.

Sketch 'A' to accompany QP Code: 824





ALL DIMENSIONS ARE IN MM

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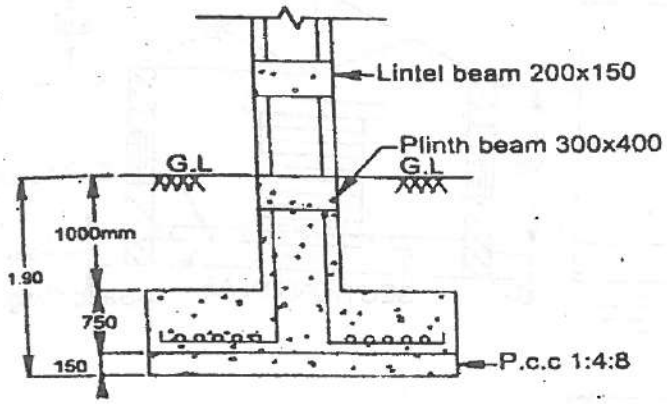
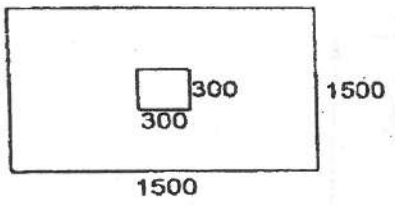
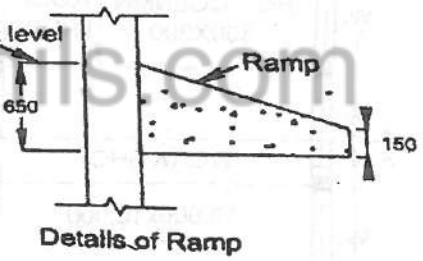
Contd. of Sketch 'A' to accompany QP Code: 824





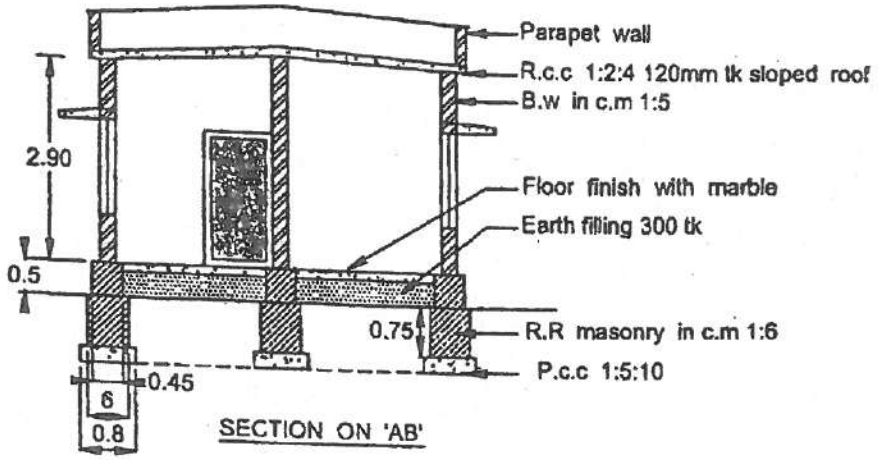
Reference
R.S - Rolling shutter - 3000x2400
W - Window - 2200x1500



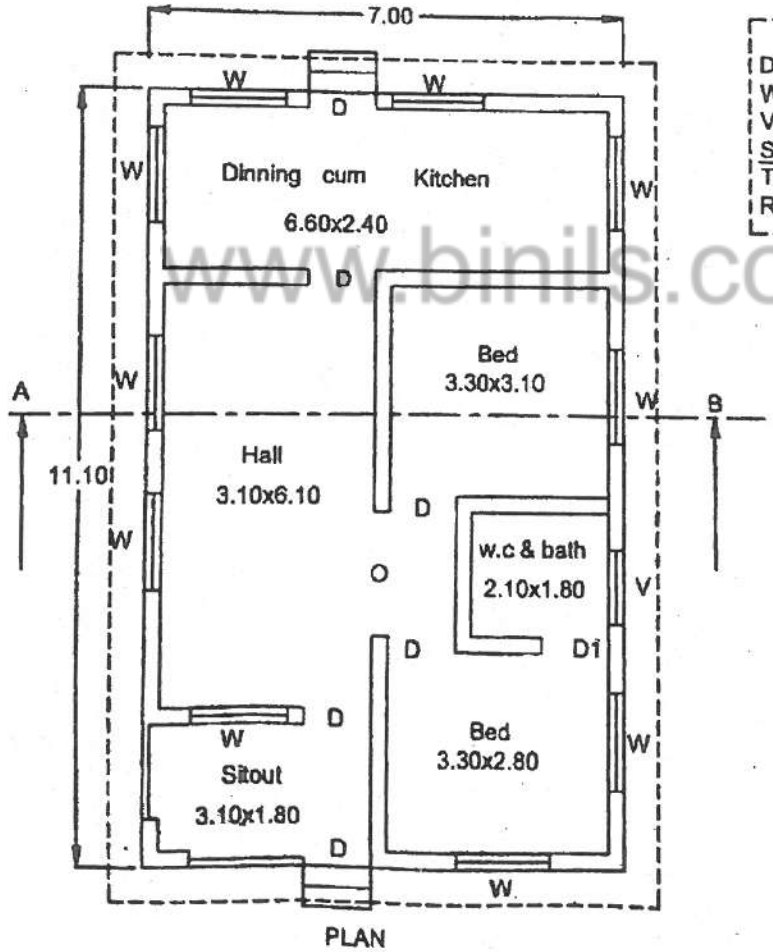
Details of Ramp

ALL DIMENSIONS ARE IN mm.

Sketch 'B' to accompany QP Code: 824



SECTION ON 'AB'



PLAN

Reference	
D—Door	1.00x2.10
W–Window	1.40x1.50
V–Ventilator	0.90x0.60
Step	
Tread	300 mm
Rise	150 mm

ALL DIMENSIONS ARE IN METRE.
