

4620

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH /APRIL-2019

DCE - FIFTH SEMESTER EXAMINATION

QUANTITY SURVEYING - II

Time: 3 hours

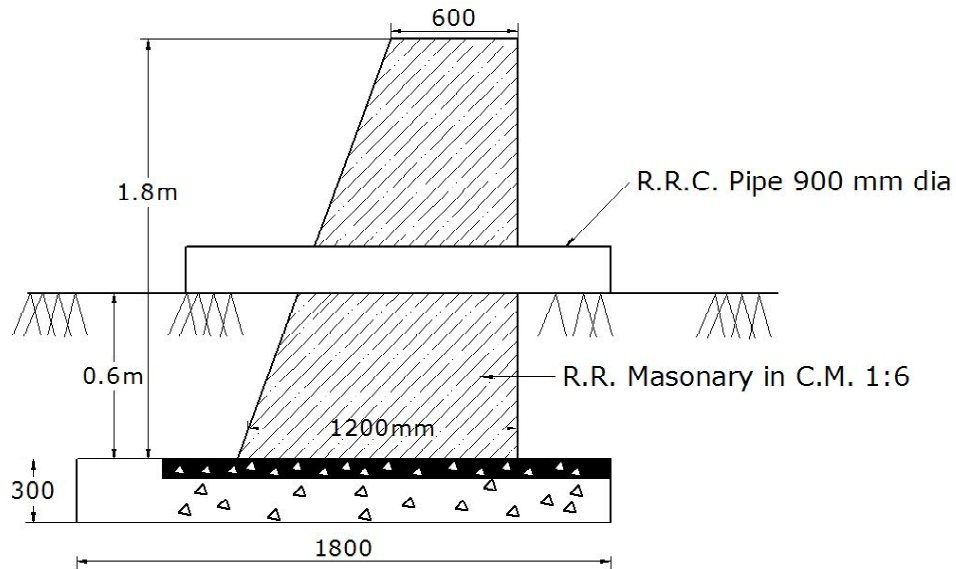
Max.Marks: 80

**PART-A****10x3=30M**

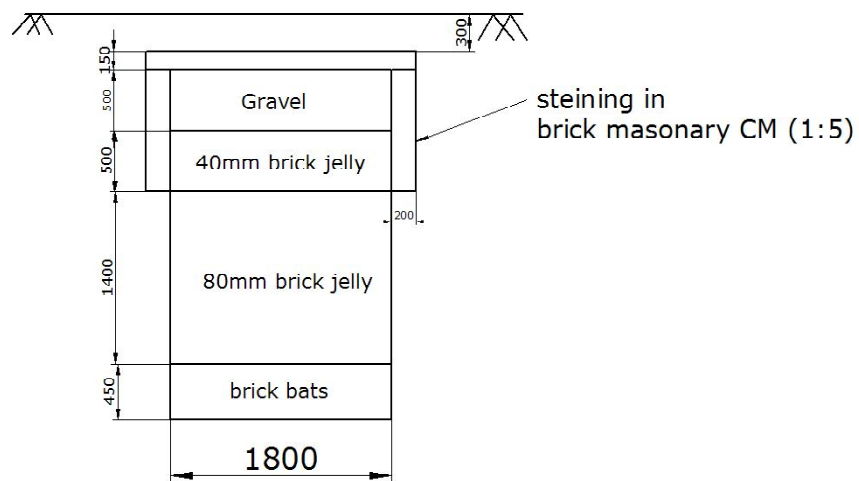
**Instructions:** 1) Answer all questions. Each question carries three marks.  
2) Answers should be brief and straight to the point and shall not exceed five simple Sentences.

1. Calculate the quantity of brick work for one flight. Given,  
No. of steps=12  
Tread =300mm, Rise =150mm and  
Width of flight =1000 mm
2. Distinguish between a straight bar and a cranked bar.
3. The size of RCC beam is 230mmx500mm, with 25 mm cover to the reinforcement on all sides. Calculate the length of each stirrup.
4. Calculate the quantities of materials required for 1 Cu.m of CC (1:5:10).
5. Calculate the quantity of cement required in bags for CC (1:2:4) using 20mm HBG metal for 35 Cu.m work.
6. Determine the total lead for conveyance of bricks, if the lead is 5.00km (MR), 10.00 km (CT) and 4.00km (ST).

- \* 7. Prepare the detailed estimate of granular shoulders on either side of WBM road of 800.00m length and 1m width, made up of 100 mm loose thickness and compacted to 75mm thick.
- 8. The cross section of head wall of a pipe culvert shown below. Calculate the quantity of R.R masonry in C.M. (1:6), if the length of head wall is 6.5m.



- 9. The dimensions of the scum board of a septic tank are 1.0x0.8x0.12 m. Calculate the quantity of plastering in CM (1:5).
- 10. The cross section of a soak pit of 1.8m dia. is shown in figure. Prepare the detailed estimate for the quantity of brick masonry in CM (1:5) for steining.



**PART-B**

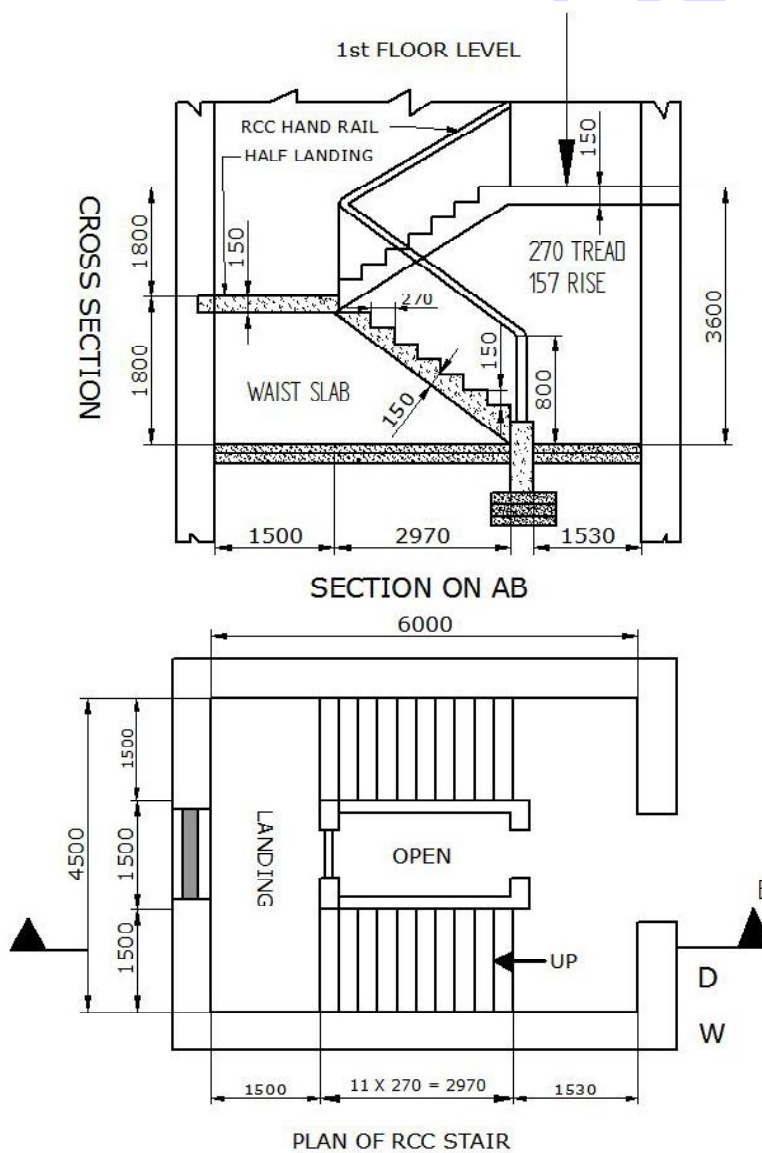
**5x10=50M**

**Instructions:** 1) Answer any five questions. Each question carries ten marks.

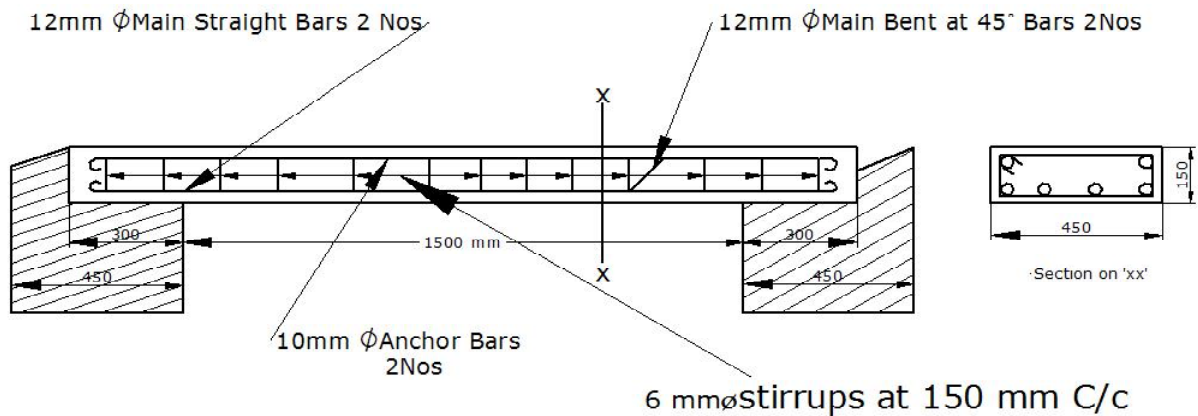
2) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Prepare a detailed estimate for open wall stair case shown in figure.

- i) R.C.C 1:2:4 for waist slab and landing.
- ii) Brick masonry in CM 1:6 for steps.
- iii) Plastering with CM 1:5 for steps.



- \* 12. Calculate the quantity of steel in R.C.C lintel. The lintel is used for a clear span of 1.5m and has bearing of 300mm on the walls on either side. The lintel has the following reinforcement.
- 12mm diameter main bars 2No.s straight and 2No.s crank 45° at 1/5<sup>th</sup> of clear span on either side from ends.
  - 10mm diameter anchor bars 2No.s at top.
  - 6mm diameter stirrups at 150mm centre to centre through out the length of lintel.



13. Prepare a data sheet and calculate the cost of the items given below using the lead statements of materials.

- Cement Concrete (1: 3: 6) using 40mm HBG metal - 1m<sup>3</sup>
- R.R Masonry in CM (1: 6) -1m<sup>3</sup>

C C(1: 3: 6) -1m<sup>3</sup> R.R Masonry in CM (1: 6)-1m<sup>3</sup>

0.93 m<sup>3</sup> 40mm HBG metal 1.10 m<sup>3</sup> Rough stone

----m<sup>3</sup> sand 0.34m<sup>3</sup> CM (1: 6)

----m<sup>3</sup> cement 0.54 No.s Mason 1st class

0.06 No.s-Mason 1st class 1.26 No.s Mason 2nd class

0.14 No.s Mason 2nd class 1.40 No's man Mazdoors

1.8 No's Man Mazdoors 1.40 No's Women Mazdoors

\* 1.40 No's women Mazdoors L.s Sundries

L.S sundries

Lead statement of material:

S.no	Materials	Rate(Rs)	Per	Lead	Conveynce Charges
1	40mm size HBG metal	300	1m <sup>3</sup>	10KM	Rs.15 per m <sup>3</sup> per1 KM
2	Sand	75	1m <sup>3</sup>	20KM	Rs.10 per m <sup>3</sup> per1 KM
3	Rough stone	250	1m <sup>3</sup>	8KM	Rs.12 per m <sup>3</sup> per1 KM
4	Cement	1800.00	1tonne	3km	Rs.1per bag

Labour charges per day

1. Mason 1st class = Rs.50 each
2. Mason 2nd class = Rs.40 each
3. Man Mazdoor = Rs.30 each
4. Woman Mazdoor = Rs.25 each
5. Hand mixing charges of CM per m<sup>3</sup> = Rs.10.00

14. Prepare a data sheet and calculate the cost of the items gien below using lead statement

a) Brick Masonry in CM(1:5)-1m<sup>3</sup>

b) Plastering in CM (1:5) 12mm thick -10m<sup>2</sup>

Materials & Labour required for 1 m<sup>3</sup>

Plaster in CM (1:5)

0.15 m<sup>3</sup> CM (1:5)

1.1 No's -Mason

0.5 No's-Man Mazdoor

1.1 No's - woman Mazdoor

L.S- sundries

Brick Masonry in CM(1:5)

512 No's bricks

0.34 cum -CM (1:5)

1.8 No's -Masons

0.70 No's man Mazdoor

2.1 No's woman Mazdoors

1.0 Cum - Scaffolding charges

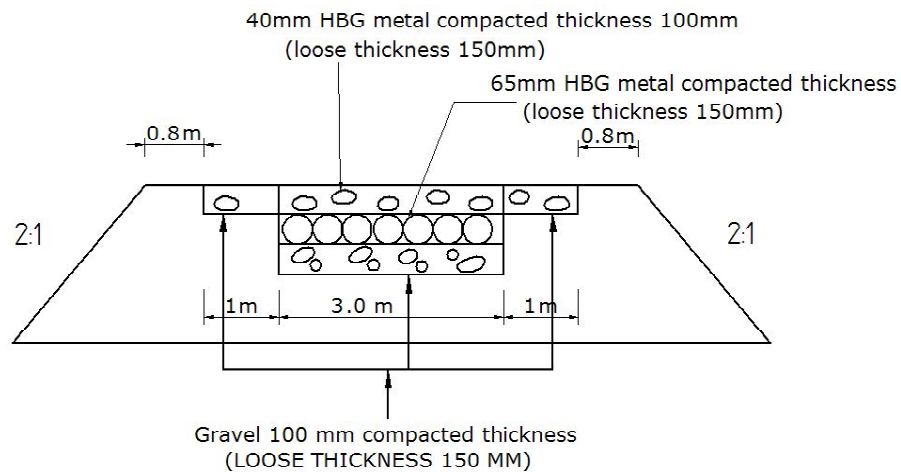
L.S -sundries

Lead statement of material :

S.no	Material	Rate (Rs)	Per	Lead	Conveyance Charges
1	Sand	75.00	1m <sup>3</sup>	9KM	Rs.3 per 1 KM
2.	Bricks	2500	1000Nos	12KM	Rs.3 per 1KM
3.	Cement	3400.00	1MT	Local	---

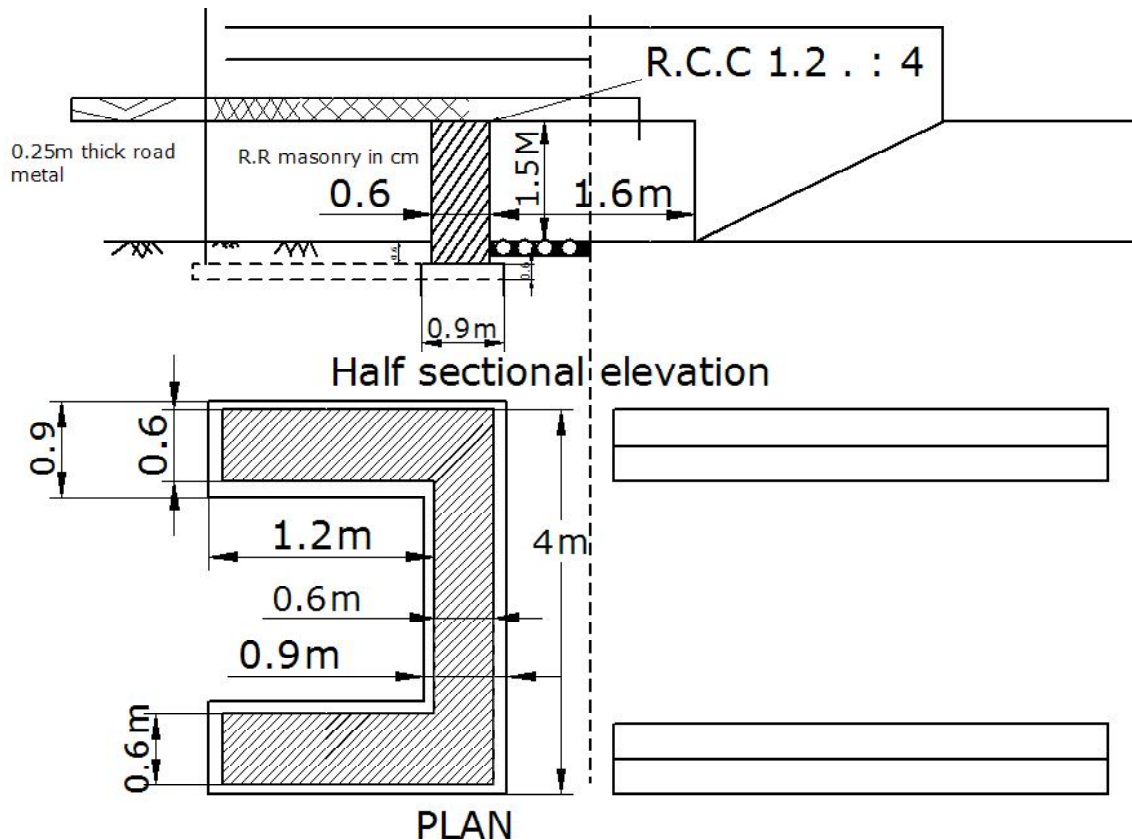
15. Prepare the detailed estimate of water bound macadam road of length 1.00 km with the details shown in fig. Treat that the ground level is uniform and there are no difference level and the dips pot holes and ruts do not exist.

- collection and supply 65 mm HBG metal
- collection and supply of gravel for sub base course
- Spreading of 40mm HBG metal
- Spreading of gravel for sub base course and shoulder



16. Prepare the detailed estimate for the following items of work of an R.C.C slab culvert as shown in figure.

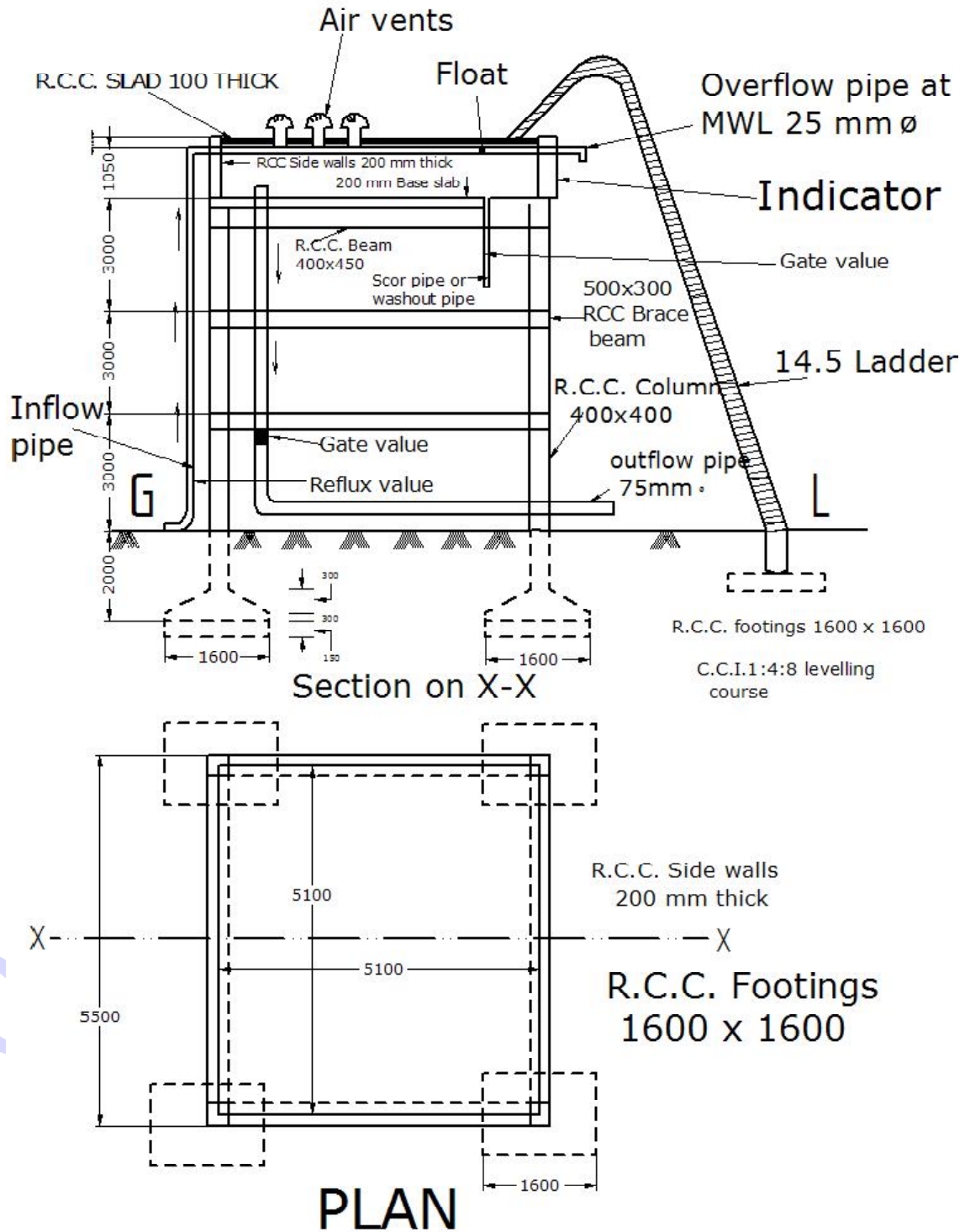
- a) Earth work excavation for foundation for abutments and return walls.
- b) R.R masonry in C.M (1:3) for abutment and returns up to bottom of deck slab.



17. Prepare the detailed estimate for the following items of work from the plan and sectional elevation of an over head R.C.C tank as shown in figure.

- a) Earth work excavation for foundation in hard gravelly soils.
- b) R.C.C (1:2:4) using 20mm HBG metal for footings and columns up to G.L

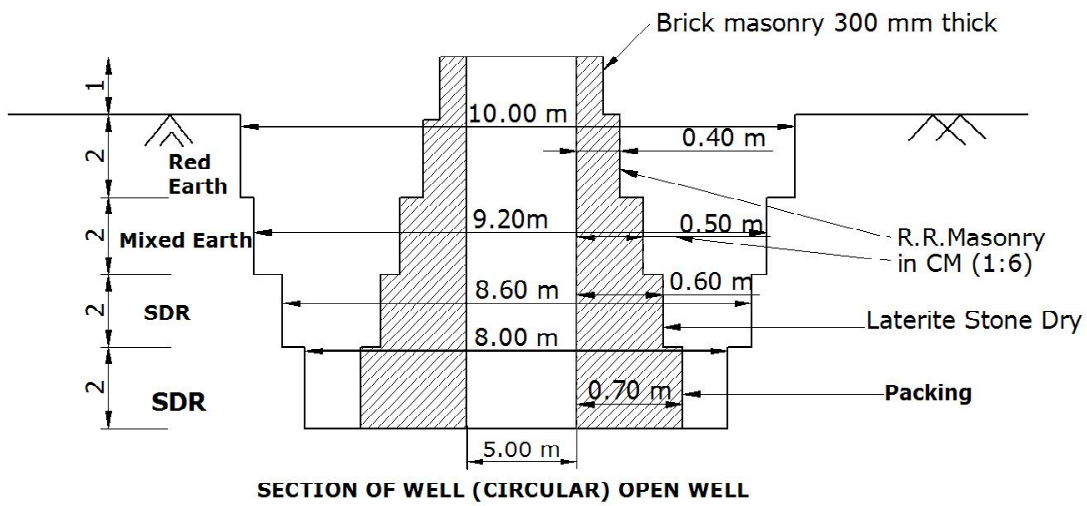
- \* c) R.C.C (1:1.5:3) using 20mm HBG metal for bottom slab, top slab and side walls





\* 18. Prepare the detailed estimate for the following items of work for an open well shown in figure.

- a) Earth work excavation for open well
- b) R.R Masonry in CM (1:6)
- c) Refilling the excavated soil around the steining.



(All Dimensions are in 'm')

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