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C14-C-503

4620

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2021

DCE - FIFTH SEMESTER EXAMINATION

QUANTITY SURVEYING - II

Time : 3 hours]

[Total Marks : 80

PART—A

4×5=20

- Instructions :**
- (1) Answer *any five* questions.
 - (2) Each question carries **four** marks.
 - (3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Draw the rough plan of a dog-legged staircase (not to scale).
2. Write the expression to calculate the length of a straight bar with hooks in a simply supported beam.
3. Distinguish between main reinforcement and distribution reinforcement used in RCC slabs.
4. Tabulate the format of standard data sheet.
5. Determine the quantity of cement required for 5 cu.m. of RCC (1 : 2 : 4) using 20 mm HBG metal.
6. Write a short note on lead statement.
7. Prepare the detailed estimate of granular shoulders, on either side of WBM road of 800 m. The width of shoulder is 1 m. The compacted thickness is 100 mm (loose thickness 150 mm).

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8. Prepare an estimate for a WBM road of length 500 m for spreading 65 mm HBG metal for wearing course of width 3.75 m.
9. The size of the scum board of a septic tank are 1.5 m × 0.85 m × 0.15 m. Calculate the quantity of plastering.
10. The cross-section of a soak pit of 1.8 m. dia. is shown in figure 1. Calculate the quantity of brick bats for soak pit :

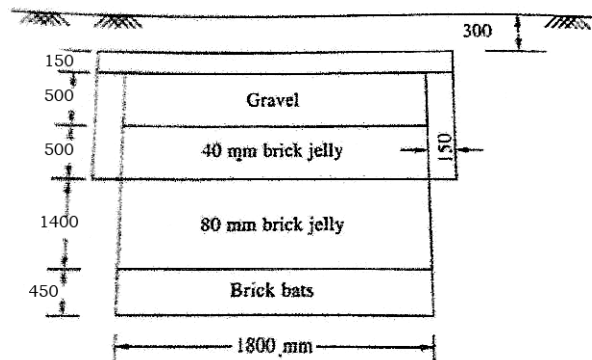


Fig.1

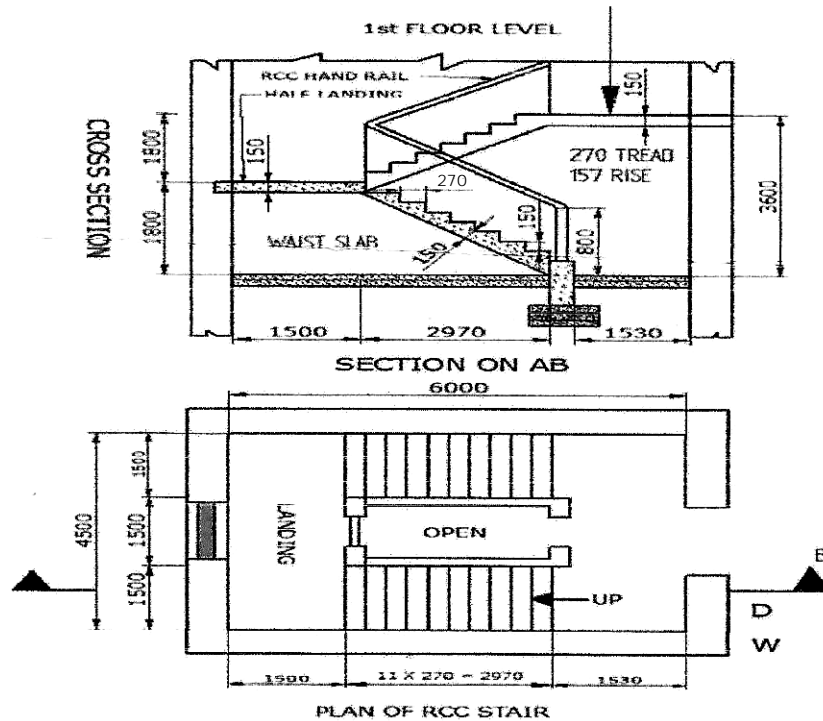
PART—B

15×4=60

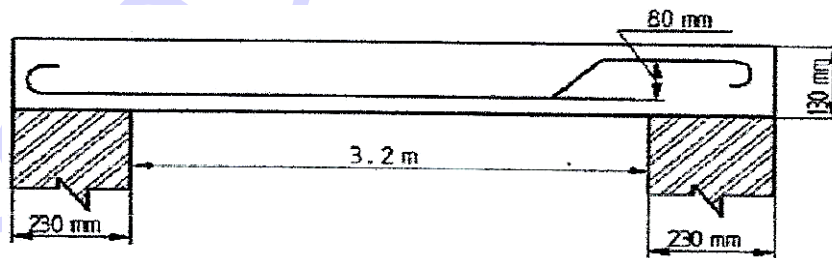
- Instructions :**
- (1) Answer *any four* questions.
 - (2) Each question carries **fifteen** marks.
 - (3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

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11. Prepare a detailed estimate for open wall staircase as shown in the figure below :
 - (i) R.C.C 1 : 2 : 4 for waist slab and landing.
 - (ii) Brick masonry in CM 1 : 6 for steps.



12. Calculate the length of steel rod of 10 mm dia as shown in the figure below :



Assume end cover as 20 mm.

13. Find the lead in equivalent distance on metalled road for the following items :

- | | | |
|---------------------|---|-----------------------------|
| (i) 20 mm HBG metal | : | 100 km MR + 7 km CT. |
| (ii) Sand | : | 8 km MR + 4 km CT + 2 km ST |
| (iii) Bricks | : | 8 km MR + 3 km CT. |

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14. Prepare the data sheet for Brick masonry in C.M (1 : 8)- unit - 1 m³ :

512 Nos - Country bricks - ` 6,480 for 1000 Nos per m³.

0.34 m³ - C.M (1 : 8) - ` 3,875 per m³.

0.42 Nos. - Mason I class - ` 650 each per day.

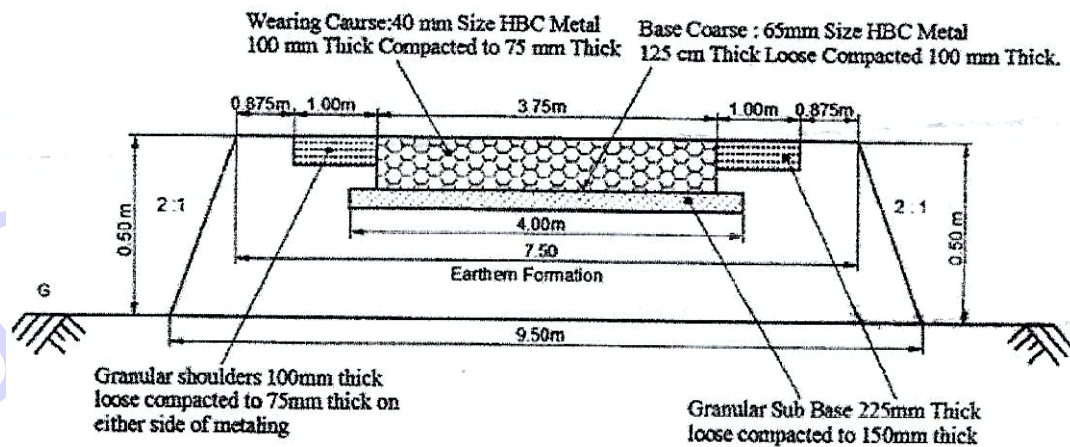
0.98 Nos. - Mason II class - ` 525 each per day.

0.70 Nos. - Man mazdoors - ` 475 each per day.

2.10 Nos. - Women mazdoors - ` 475 each per day.

LS - Sundries - Lumpsum

15. Prepare the detailed estimate for the following items for a WBM road having length 800 m shown in the figure below :



(a) Collection and supply of 65 mm HBG metal for base course.

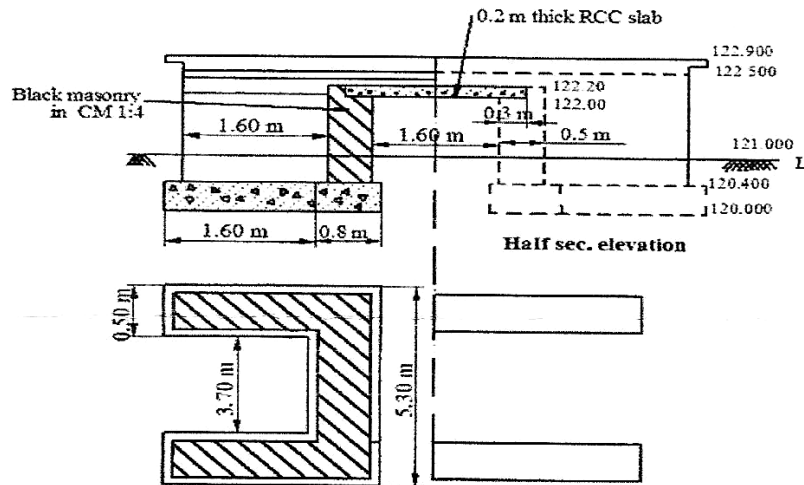
(b) Spreading of 40 mm HBG metal for wearing course.

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

(a) Earth work excavation for foundation for abutments and return walls.

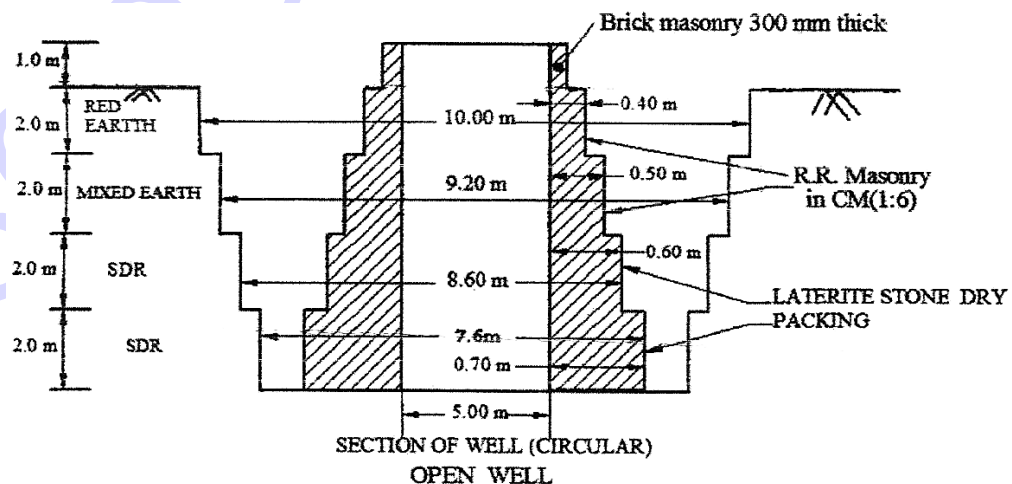
(b) R.C.C (1 : 2 : 4) for deck slab.



17. Prepare the detailed estimate for the following items of work for an open well as shown in the figure below :

(a) Earthwork excavation in different types of soils.

(b) RR masonry in CM (1 : 6).



18. Write any five structural elements for which the quantities of different materials are calculated.

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