

5094

Name \_\_\_\_\_ Index No. \_\_\_\_\_ / \_\_\_\_\_

2306/304  
MEASUREMENT OF BUILDING  
AND CIVIL ENGINEERING  
WORKS

Candidate's Signature \_\_\_\_\_

Oct./Nov. 2015  
Time: 3 hours

Date \_\_\_\_\_



THE KENYA NATIONAL EXAMINATIONS COUNCIL

## DIPLOMA IN QUANTITY SURVEYING

MEASUREMENT OF BUILDING AND CIVIL ENGINEERING WORKS

3 hours

## INSTRUCTIONS TO CANDIDATES

*Write your name and index number in the spaces provided above.*

*Sign and write the date of examination in the spaces provided above.*

*You should have Dimension Papers and a Scientific Calculator for this examination.*

*This paper consists of FIVE questions in TWO sections; A and B.*

*Answer Question ONE (Compulsory) and ONE question from section A, and ONE question from section B in the spaces provided in this question paper and on the dimension papers as necessary.*

*Question One carries 40 marks while the rest carry 30 marks each.*

*Maximum marks for each question are as indicated.*

*Candidates should answer the questions in English.*

## For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	1	40	
	2	30	
	3	30	
B	4	30	
	5	30	
TOTAL SCORE			

This paper consists of 20 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

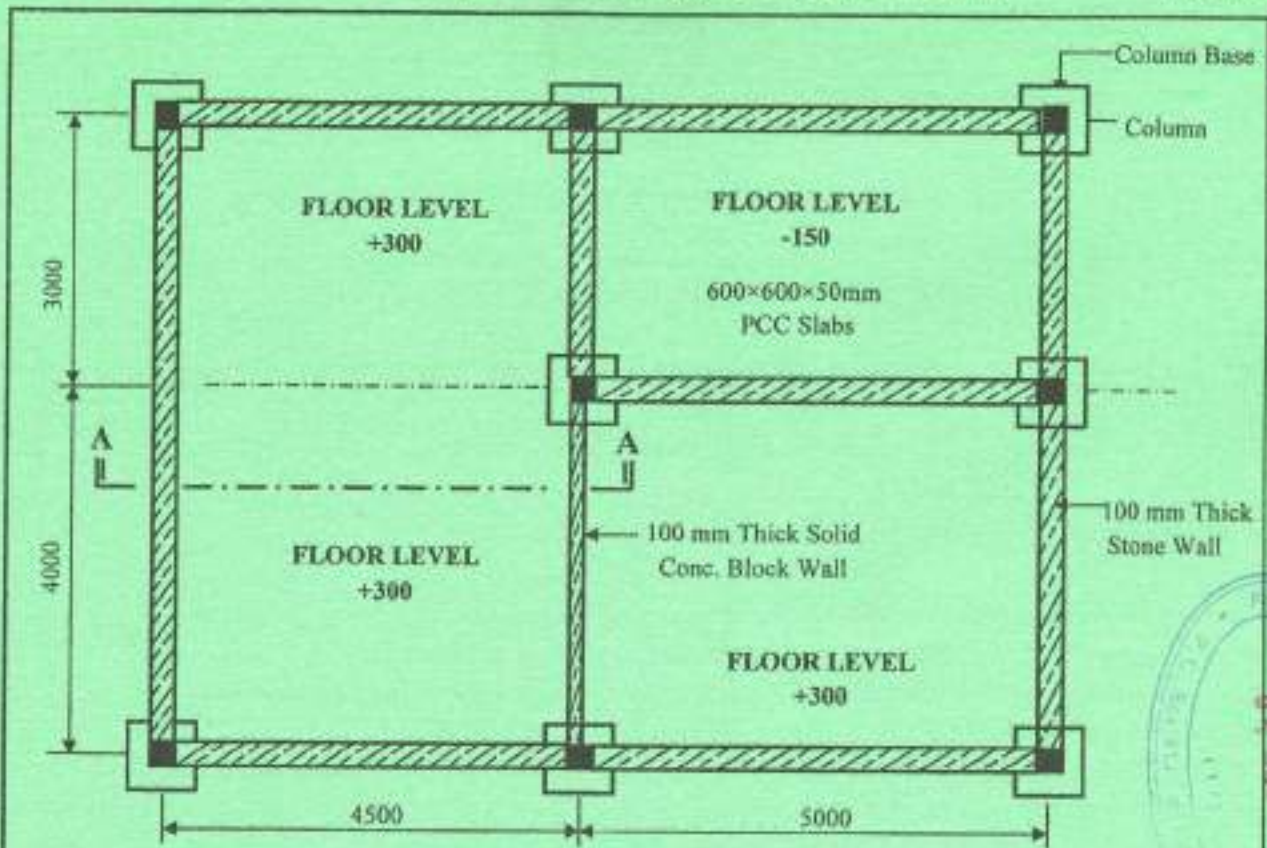


**SECTION A**

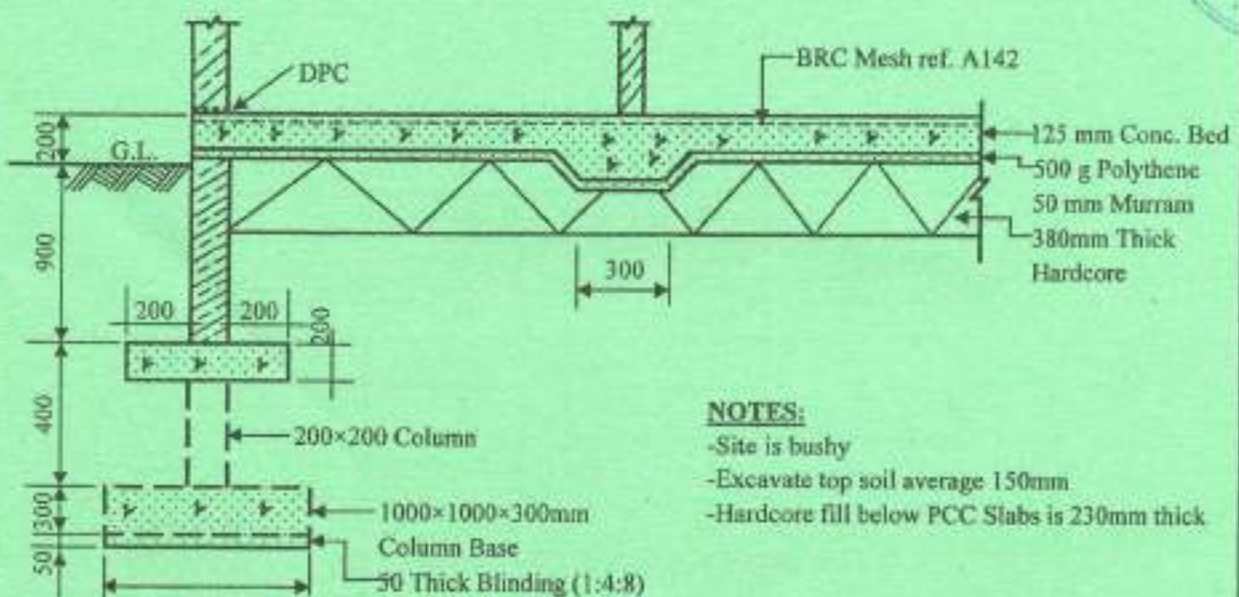
Answer question 1 (Compulsory) and ONE question from this section.

(Use the standard method of measurement of Building works for East Africa for the questions in this section.)

1. Drawing No. 01 shows the plan and section of the 'substructure works' for an office block. Take off all quantities shown up to and including the damp proof course. (40 marks)



**PLAN**



**SECTION A-A**

**NOTES:**

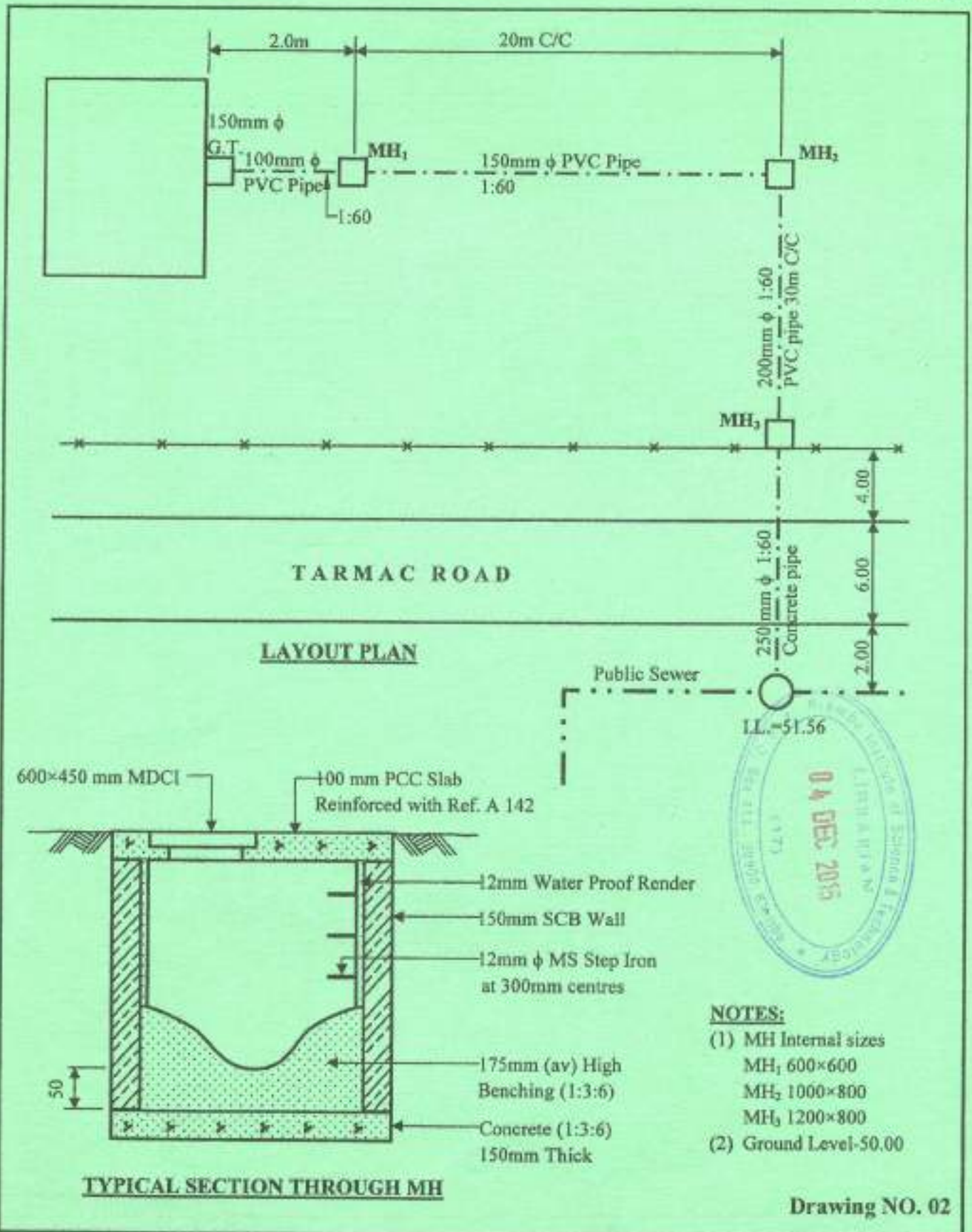
- Site is bushy
- Excavate top soil average 150mm
- Hardcore fill below PCC Slabs is 230mm thick

**Drawing NO. 01**



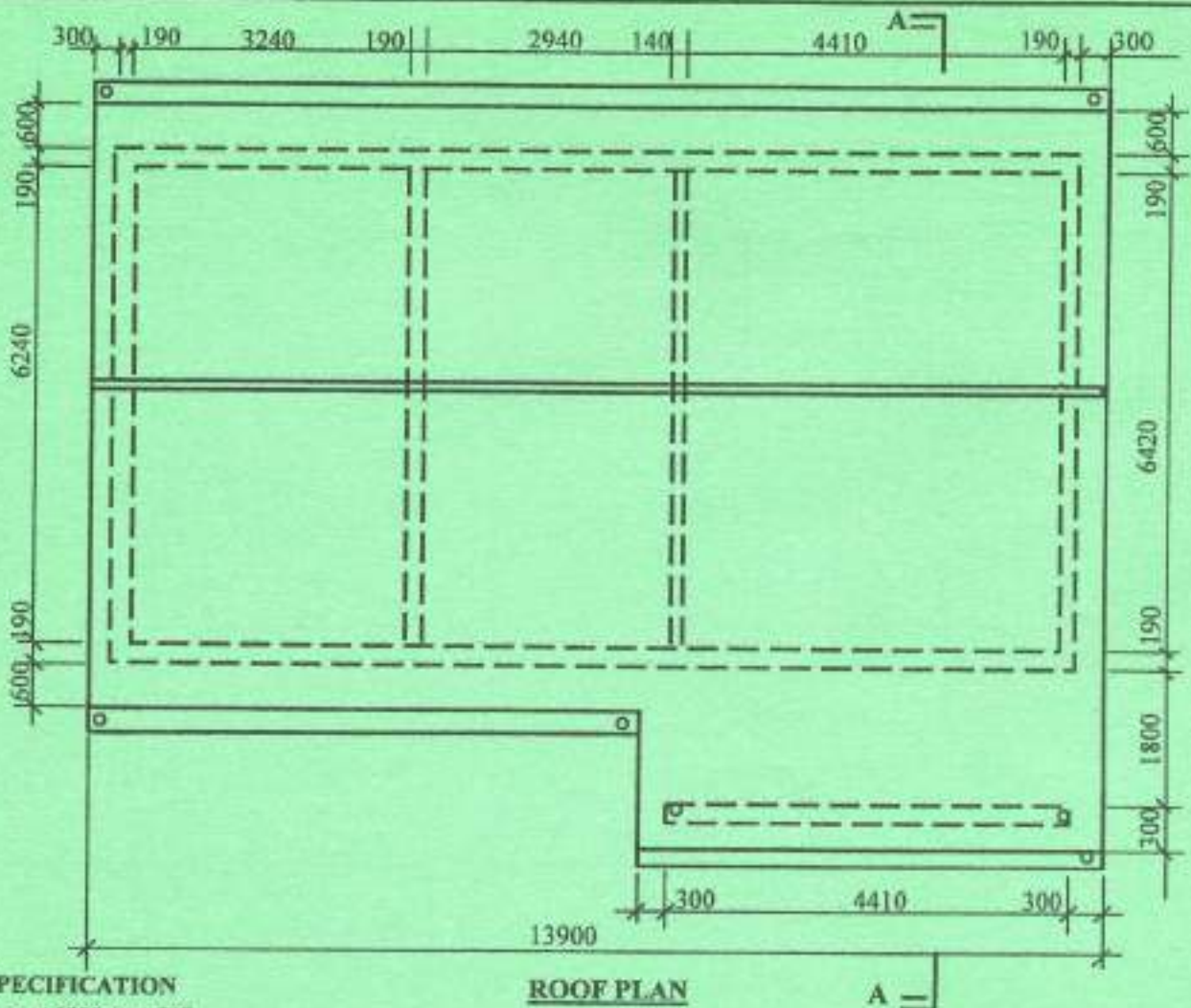


2. Drawing No. 02 shows a layout plan of drainage works and a typical section through a manhole. Take off all the quantities for the works shown up to and including connection to the sewer. (30 marks)



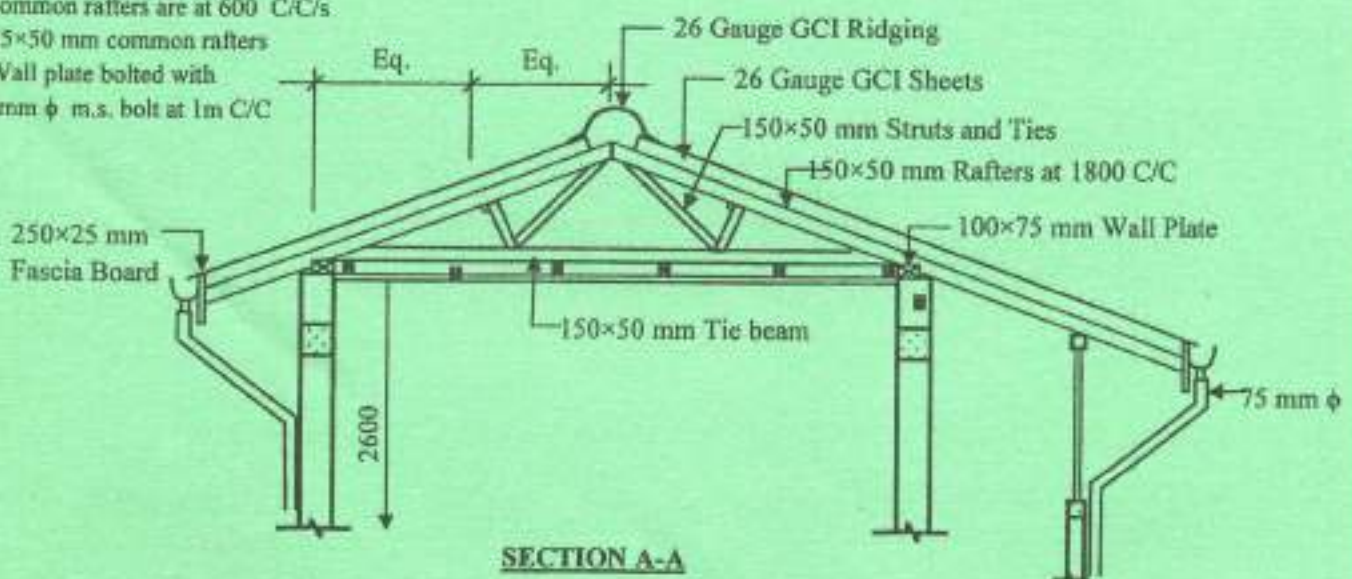


3. Drawing No. 03 shows a roof plan and a typical section through the roof. Take off all the items of the roof including rain water goods. (30 marks)



**ROOF SPECIFICATION**

- Trusses are at 1800 mm C/C
- common rafters are at 600 C/C/s
- 75×50 mm common rafters
- Wall plate bolted with 6mm  $\phi$  m.s. bolt at 1m C/C



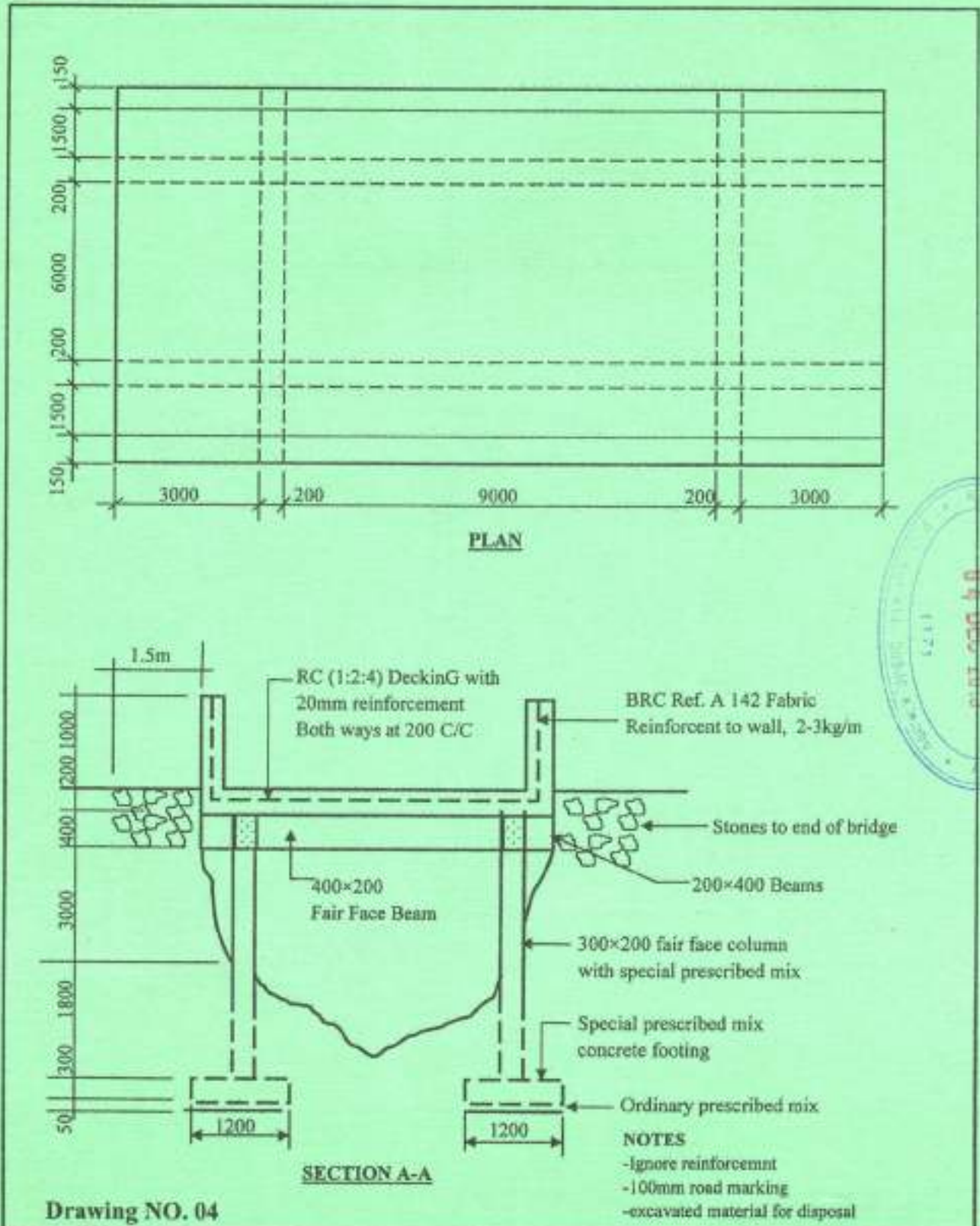
**Drawing NO. 03**



**SECTION B**

Answer **ONE** question from this section.

4. Take off all quantities for the bridge on drawing No. 04.  
 (Use the Civil Engineering standard methods of measurement). (30 marks)



5. (a) Explain the following: (8 marks)
- (i) Preambles
  - (ii) Prime cost items
  - (iii) Provisional sums
  - (iv) Protection clauses
- (b) Outline any **four** roles of a quantity surveyor in the construction industry. (8 marks)
- (c) Explain the following: (6 marks)
- (i) Penultimate payment certificate
  - (ii) The significance of final payment certificate
  - (iii) Retention money
- (d) Prepare the final account of a contract using the data below: (8 marks)

Item	Ksh.
Contract sum	32,000,000
Variations	2,600,000
Prime cost sums	600,000
Provisional sums	600,000
Re-measured and other items	3,400,000
Contingencies	800,000




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