

2306/304
MEASUREMENT OF BUILDING AND CIVIL
ENGINEERING WORKS
Oct./Nov. 2011
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN QUANTITY SURVEYING

MEASUREMENT OF BUILDING AND CIVIL ENGINEERING WORKS

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

- Answer booklet;*
- Dimension papers;*
- A copy of Standard Method of measurement of Building and Associated civil work for Eastern Africa (SMM);*
- A copy of Civil Engineering Standard Method of measurement (CESMM).*

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

Answer any THREE questions choosing TWO questions including question 1 from section A and ONE question from section B.

Question 1 carries 40 marks while the rest carry 30 marks each.

Maximum marks for each part of a question are as shown.

This paper consists of 6 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 other question from this section.

Use the Standard Method measurement of building and Associated civil works(SMM)

1. Drawing 1 shows a plan, section and elevation of kitchen cabinet.
 - (i) Take off all the quantities;
 - (ii) Abstract and bill any **ten** items. (40 marks)
2. Take off all quantities for the superstructure works shown on drawing No. 2 including rain water good. (30 marks)
3. Take off all quantities for the substructure works shown on drawing No. 3 up to and including the damp proof course. (30 marks)

SECTION B

Answer any ONE question from this section.

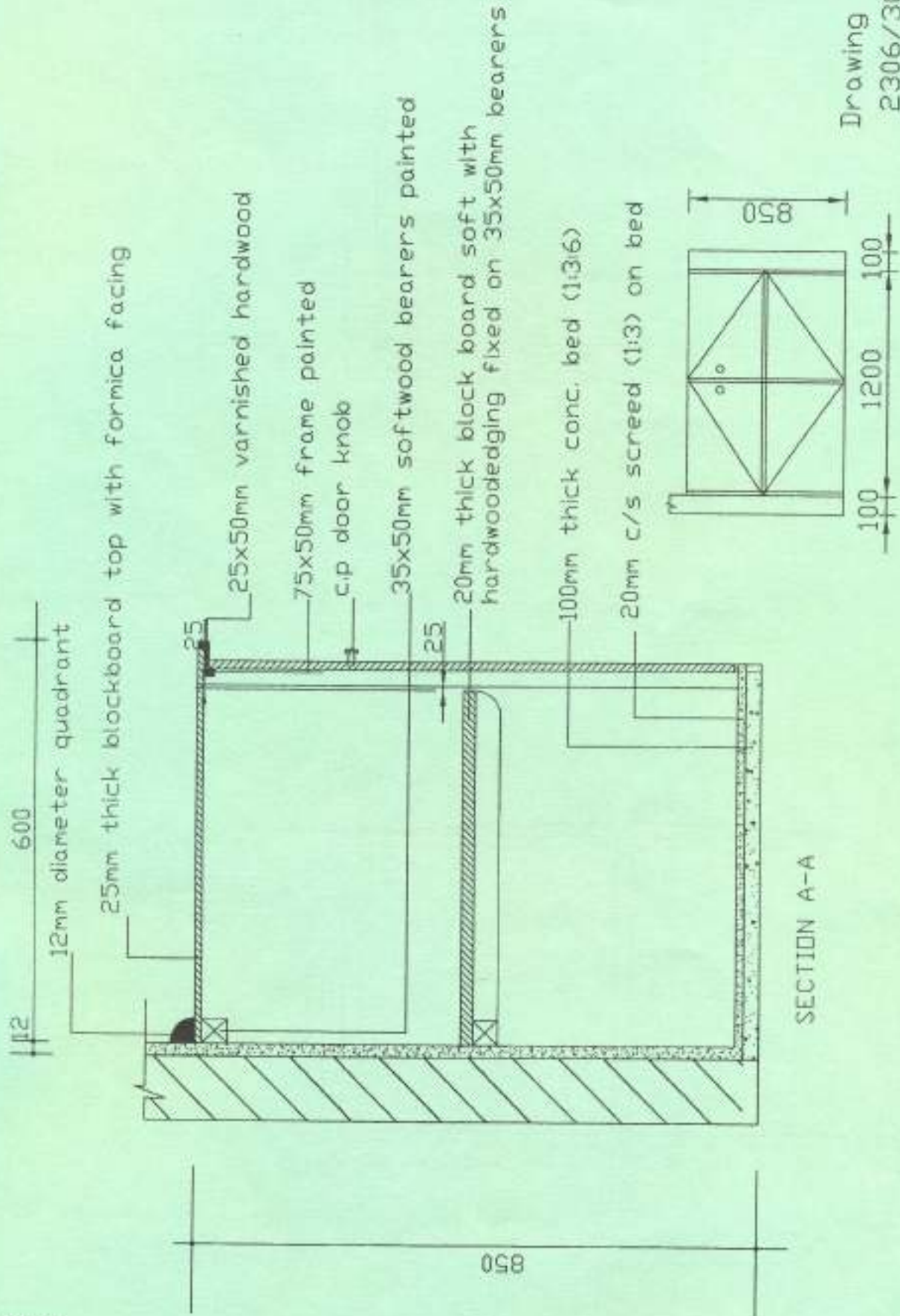
4. Drawing 4 shows the plan and section through a concrete retaining wall. Take off all quantities for the works. (Use CESMM) (30 marks)
5. (a) (i) State **three** uses of the bill of quantities.
 - (ii) Briefly describe the following type of bills of quantities:
 - I. elemental;
 - II. operation. (8 marks)
- (b) Briefly describe **four** contract documents. (8 marks)
- (c) (i) Define the term 'variations' as used in measurement.
 - (ii) State the **four** methods used in valuation of variations. (5 marks)
- (d) Describe the following as used in Building and Civil engineering contracts:
 - (i) serial tendering;
 - (ii) final payment certificate. (9 marks)

Drawing No 01
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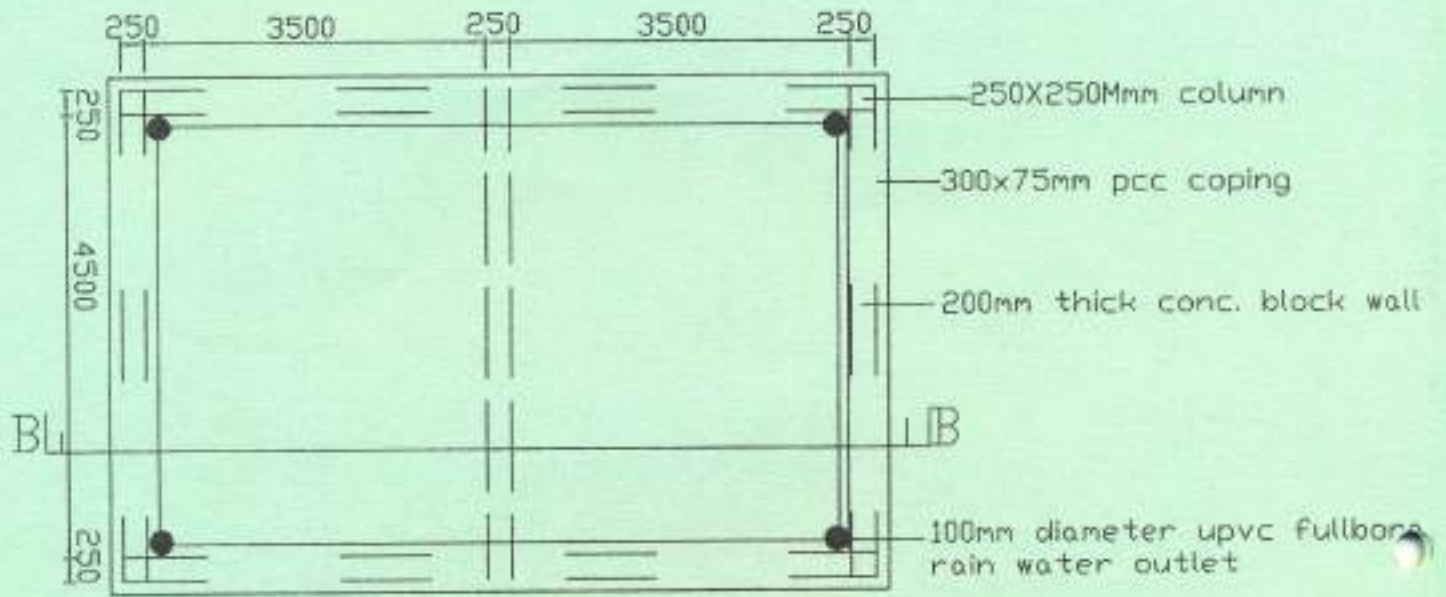
3

Turn over

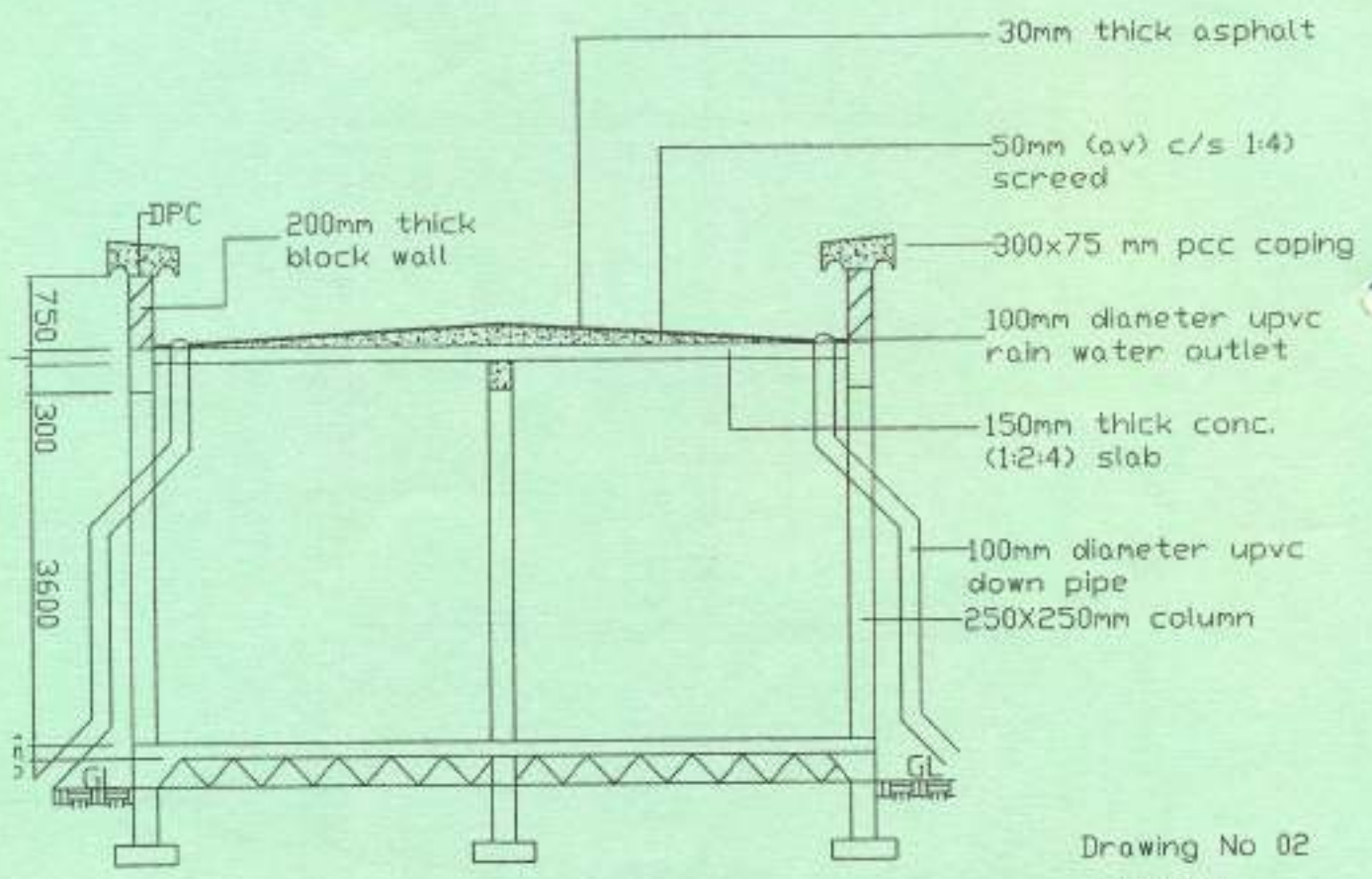


ELEVATION

SECTION A-A

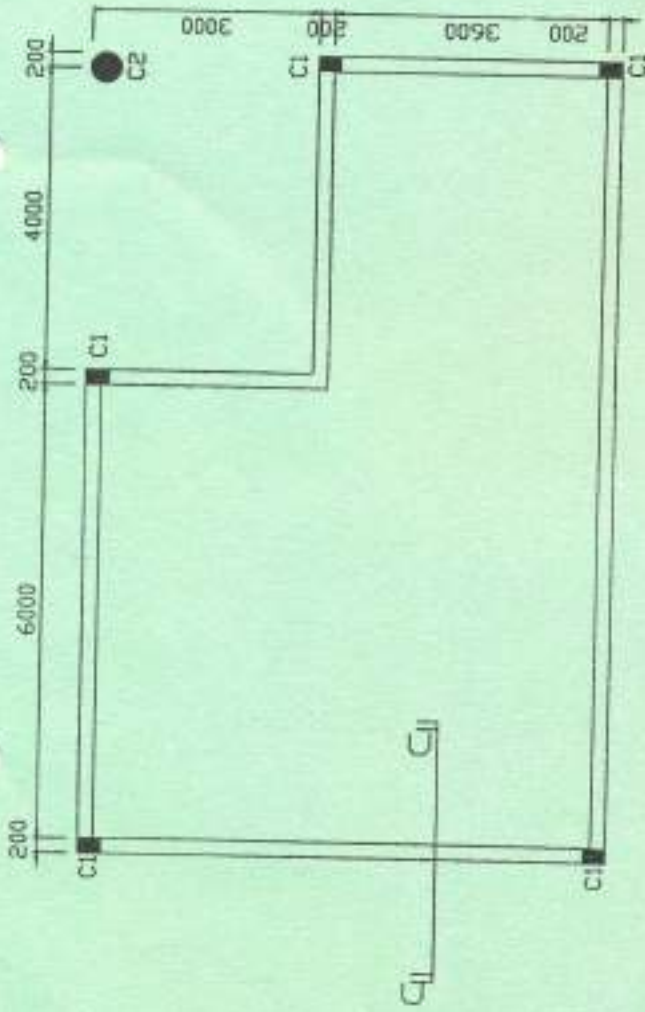


ROOF PLAN



SECTION B-B

Drawing No 02
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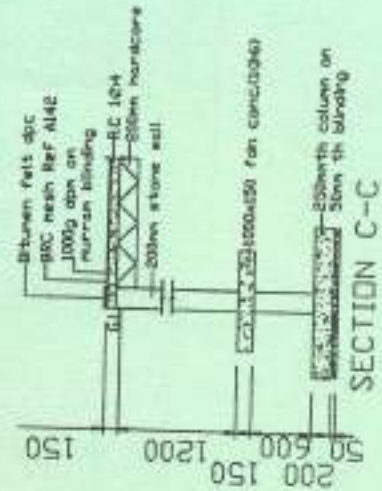


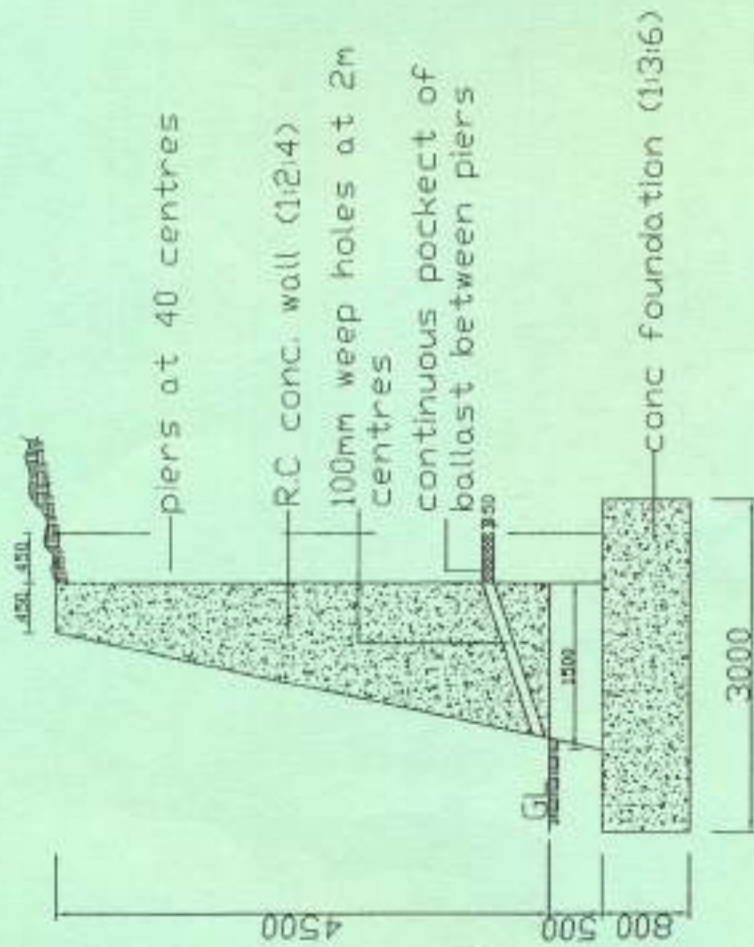
PLAN

COLUMN SCHEDULE	
COLUMN	BASE
C1	300X200
C2	200MM DIAMETER
	1500X1200
	1200MM DIAMETER

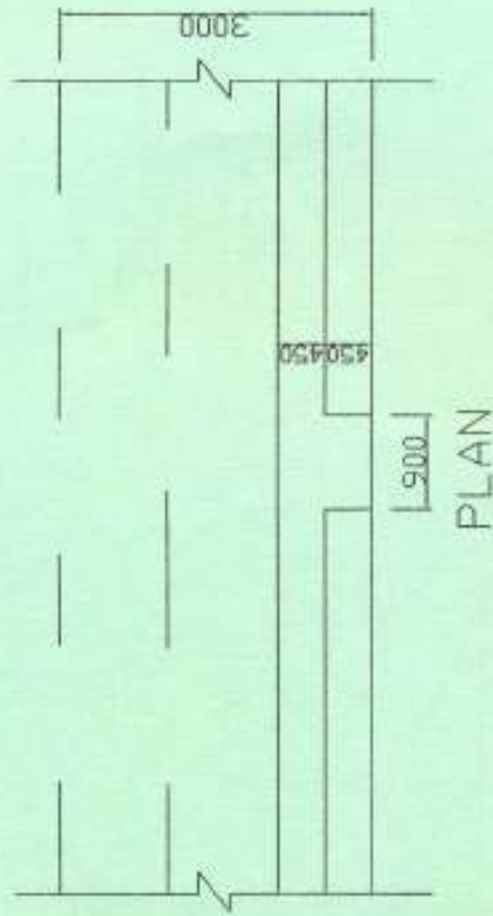
1. Top soil 150mm average depth
2. The site is bushy
3. Rock exists 1000mm below ground level

DRG NO 03





SECTION THROUGH WALL



NOTE
 ASSUME A WALL LENGTH AT 40M
 BRG NO 24 (REINFORCED
 CONCRETE RETAINING WALL)