

UGANDA MARTYRS UNIVERSITY

FORT PORTAL CAMPUS

FACULTY: ENGINEERING AND APPLIED SCIENCE

DEPARTMENT: DEPARTMENT OF CIVIL ENGINEERING

COURSE CODE: BCE3103: COURSE NAME: QUANTITY SURVEYING AND ESTIMATES

FINAL ASSESSMENT

ACADEMIC YEAR 2023/2024 SEMESTER I

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Date of Examination: 13TH DECEMBER 2023

Time allowed: 3 hours (9:00Am – 12:00Pm)

Instructions to Candidates:

Read the following before answering the examination questions.

1. This Exam contains **Six (6)** questions.
2. **Question One and Two are compulsory.**
3. Answer any **two (2)** questions of the remaining ones.
4. Attach all Question Papers on the answer booklets.
5. All Questions carry equal marks.
6. Show all the necessary workings.
7. Start each question on a fresh page.
8. Read other instructions on the answer booklet.
9. Do **NOT** write anything on this question paper.

You should have the following in this Examination.

Answer Booklet, Drawing instruments, graph papers, non-programmable calculator and IEE Tables for the current ratings and voltage drops, 17th edition.

Question One (25 Marks)

- a) Define taking-off and explain why it is important? (3 marks)
- b) Write brief notes on each of the following: - (5 marks)
 - a. Dimension Paper (3 marks).
 - b. SMM and its importance (5 marks).
- c) List down five basic forms of dimensions used in measurements. (4 marks).
- d) Briefly Explain the traditional system of measurement. (5 marks).
- e) It is advisable to make an initial site visit before starting any measurements. Mention 5 aspects that should be noted during the initial site visit. (5 marks).

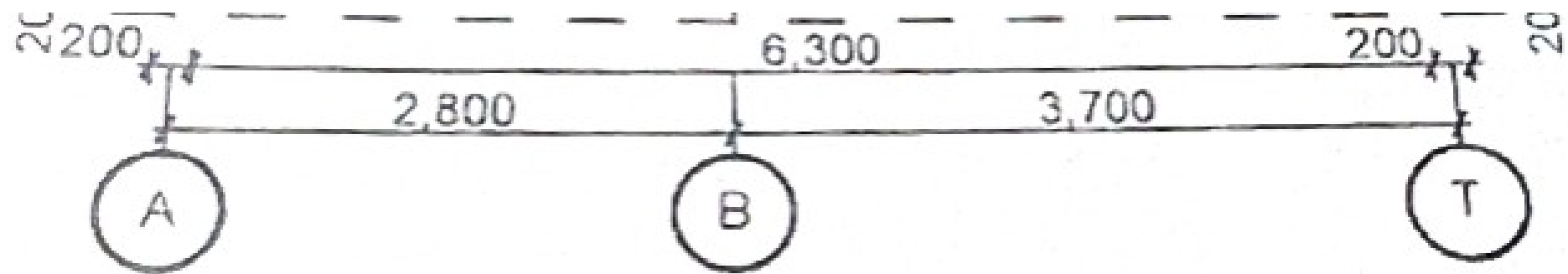
Question Two (25 marks)

- a) With illustrations, explain each of the following processes in setting down dimensions in paper based taking off. (4 marks)
 - i. Dotting On (4 marks)
 - ii. Alterations to dimensions (4 marks)
 - iii. Timesing (4 marks)
 - iv. Anding-on (4 marks)
 - v. Deductions
- b) Explain the following principles in taking-off: (2 marks)
 - i. Extra Over (2 marks)
 - ii. Prime cost (1 marks)
 - iii. Provisional Sum

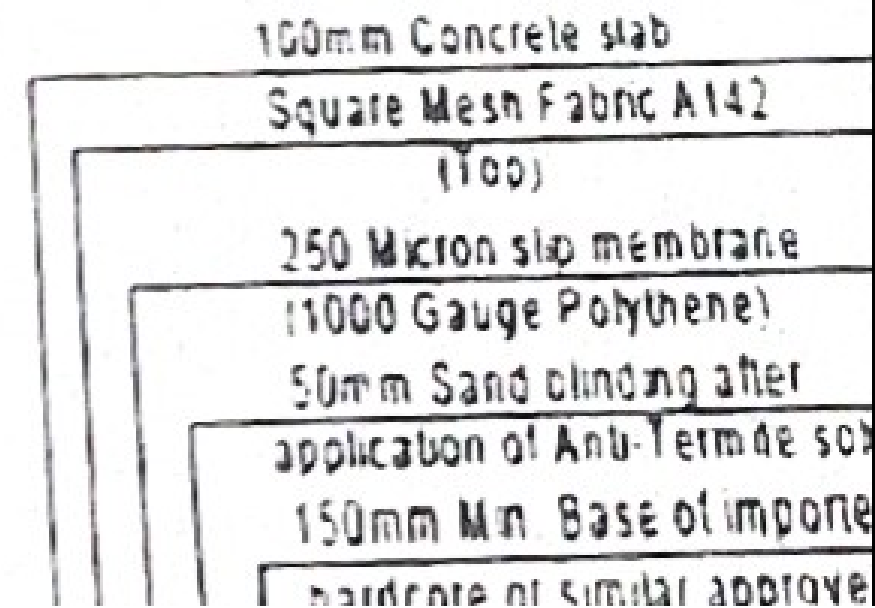
Question Three (25 marks)

Study the attached drawing and assumptions below and carefully answer the following questions. (5 marks)

- a) Compute the mean girth for the plinth walling. (5 marks)
- b) Take off for site preparation, foundation and plinth walling up to oversite slab. Please note that the site has termite nests, bushes, and undergrowth, 2 acacia trees with girth 450 mm, 500mm, and 750mm, one tree stump 1.5m high with girth 750 mm, 150mm topsoil to be preserved in heaps. Site is sloping 1in10. Concrete shall be of grade C25. (20 marks).

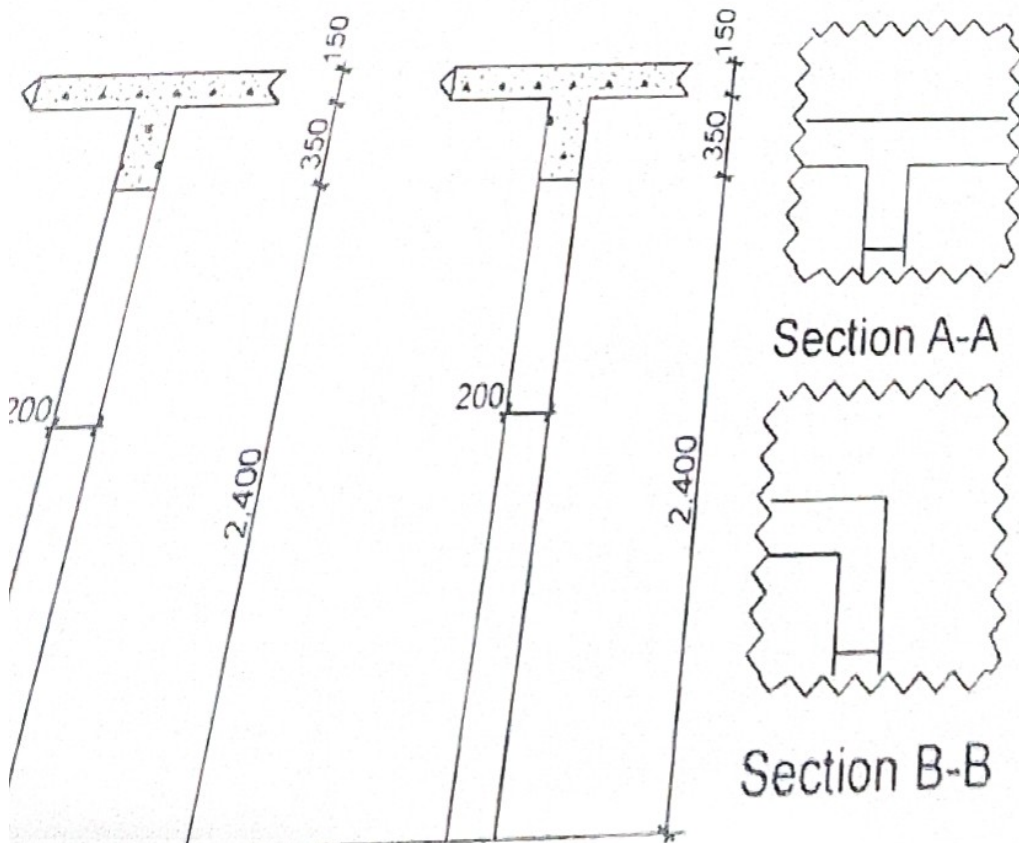
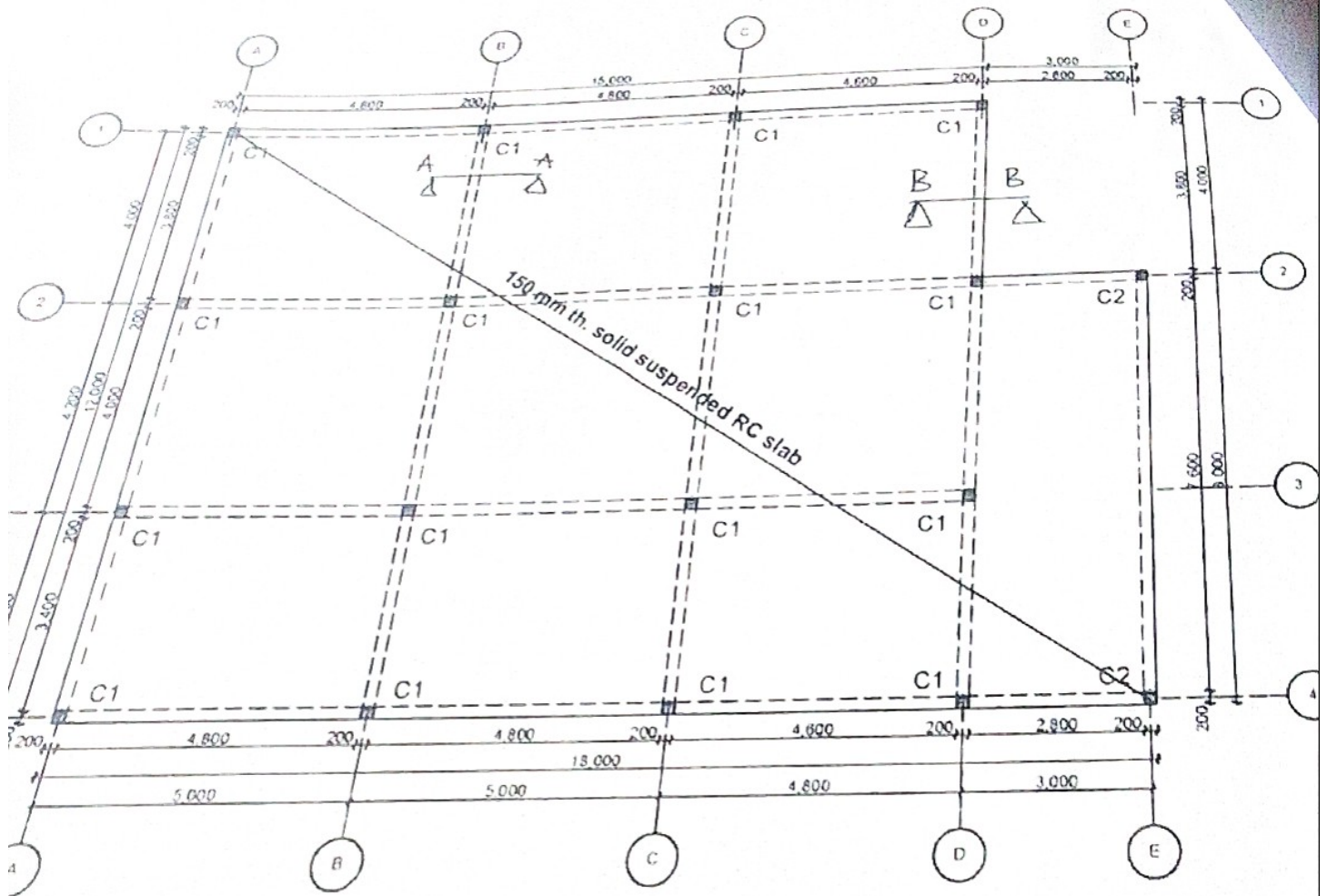


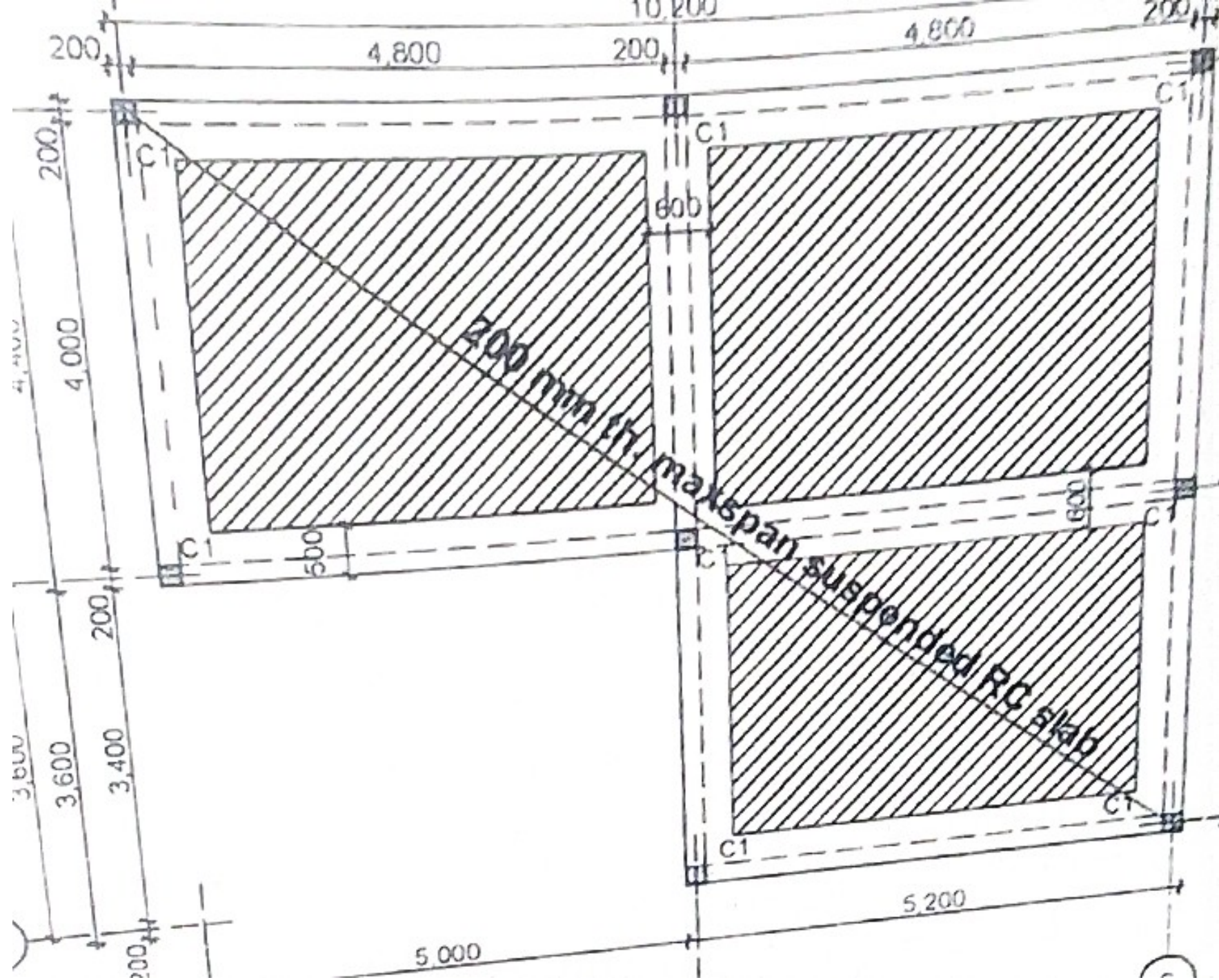
FOUNDATION LAYOUT FOR GATE HOUSE (Scale 1:50)



b) Slab
All Concrete shall be of grade C25.

(5 marks)





...reference to the standard...
...les how each of the following can be measured.

- Removing off tree stumps (3 marks)
 - i. Disposal of excavated material (3 marks)
 - ii. Excavating rock (2 marks)
 - iv. Damp proof course (2 marks)
 - v. Disposal of water (2 marks)
 - vi. Formwork to suspended floor slab, 4.5 m high (soffit to floor). (3 marks)
- With reference to the Standard Method of Measurements of East Africa, explain why an SMM is important in preparation of bills of quantities. (3 marks)
- Define waste calculations used in setting down dimensions. (4 marks).
- State any three roles of a quantity surveyor on typical construction project. (3 marks)

END