



TECHNICAL UNIVERSITY OF MOMBASA
FACULTY OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF BUILDING AND CIVIL ENGINEERING
UNIVERSITY EXAMINATION FOR:

DIPLOMA IN CIVIL ENGINEERING
DCE 2209 : MEASUREMENT OF BUILDING AND CIVIL
ENGINEERING WORKS

SPECIAL / SUPPLEMENTARY EXAMINATION
SERIES: JULY 2025
TIME: 2 HOURS

Instructions to Candidates

This paper consists of **FIVE** questions

Answer **Question ONE** and **any TWO** questions.

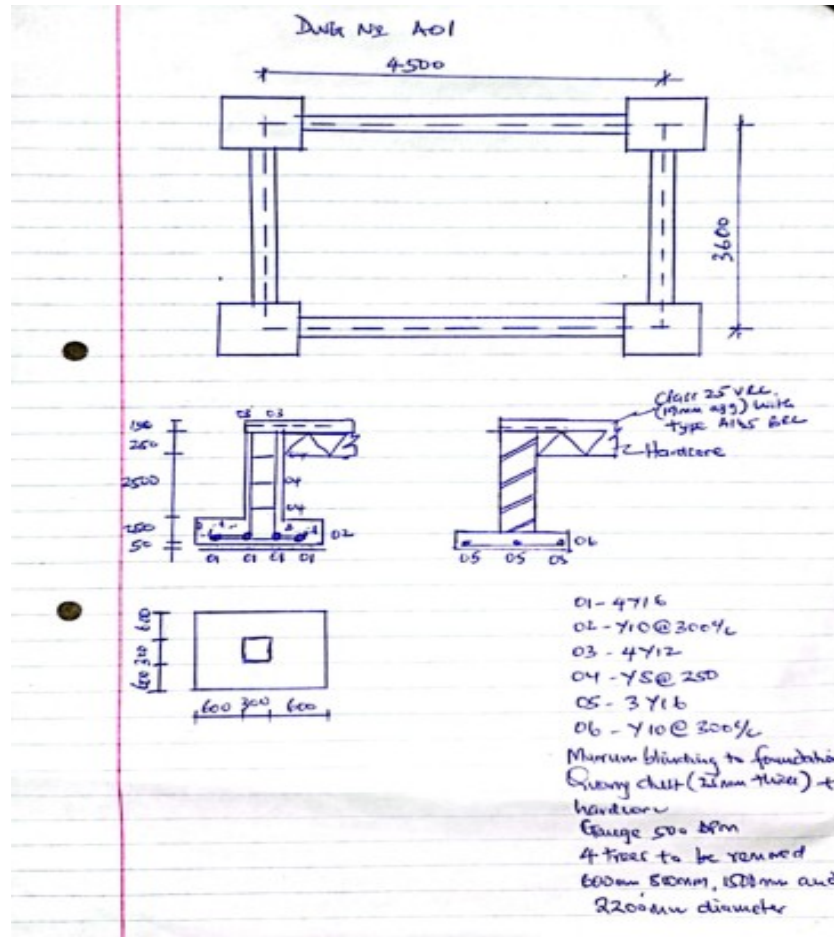
You will need a pocket calculator and SMM.

Mobile phones are NOT allowed in the examination room

Do not write on the question paper.

QUESTION ONE (30 Marks)

Take off all the quantities for the site Engineers office up to sub structures only as shown (30 Marks)



QUESTION TWO (20 Marks)

- (a) Procurement of civil engineering project (**Tendering**) can take *five* forms. Briefly explain them. (10 Marks)
- (b) Illustrate how the Query sheet is used when taking off. (5 Marks)
- (c) Outline **FIVE** roles of the quantity surveyor during the *construction* phase of the project. (5 Marks)

QUESTION THREE (20 Marks)

- (a) Briefly illustrate the use of the following terms when taking off.
- (i) Prime cost sums
 - (ii) Provisional sums
 - (iii) Grouping dimensions
 - (iv) Grouping descriptions
- (12 Marks)

- (b) Briefly explain the term **Preliminaries** as used in the Bills of Quantities and give four items that fall under this. (8 Marks)

QUESTION FOUR (20 Marks)

- (a) Outline **SIX** objectives of the Bills of Quantities. (6 Marks)
(b) Briefly explain using illustrations why the **Mean girth** is preferred over external or internal dimensions. (6 Marks)
(c) Illustrate the use of the **FOUR** columns of the dimension paper. (8 Marks)

QUESTION FIVE (20 Marks)

Take off the quantities for the underground tank shown below (20 Marks)

