



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY
Department of BUILDING & Civil engineering
UNIVERSITY EXAMINATION FOR:

BACHELOR OF TECHNOLOGY IN CIVIL ENGINEERING
TCV 4215 BUILDING TECHNOLOGY I

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: JULY 2025

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **five** questions.

Attempt question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

QUESTION ONE (COMPULSORY) 20 Marks

- a) With the aid of a sketch explain the procedure of transferring the wall width from a working drawing to the foundation trench (8 marks)
- b) Outline the roles of the following professionals
 - i) Quantity Surveyor
 - ii) Structural Engineer
 - iii) Clerk of works (6 marks)
- c) Sketch the following types of foundations
 - i) Strip foundation
 - ii) Wide strip foundations
 - iii) Stepped foundation
 - iv) Deep pile foundation (6 marks)

ANSWER ANY TWO QUESTIONS FROM THIS SECTION

QUESTION TWO (20 Marks)

- a) Explain the procedure of concreting solid ground floor (10 marks)
- b) State four reasons under underpinning (4 marks)

- c) Explain the procedure of getting building plans approval starting from the client
(6 marks)

QUESTION THREE (20 Marks)

- a) Outline the following as used in building technology
- i) Timbering
 - ii) Shoring
 - iii) Scaffolding
 - iv) Formwork (4 marks)
- b) Sketch and label the parts of solid ground floor (6 marks)
- c) With the aid of a sketch explain the procedure of plastering block wall (10 marks)

QUESTION FOUR (20 Marks)

- a) Outline the following
- i) Reinforced concrete
 - ii) Mortar
 - iii) Plastering (6 marks)
- b) Sketch the following shapes of bricks
- i) Queen closer
 - ii) Half bat
 - iii) Standard brick
 - iv) King closer (6 marks)
- c) Sketch un bonded wall and state their disadvantages (4 marks)
- d) State the qualities of good formwork (4 marks)

QUESTION FIVE (20 Marks)

- a) Sketch the following types of roofs
- i) Lean to roof
 - ii) Couple
 - iii) Closed couple (6 marks)
- b) Sketch the following
- i) Front view of block wall in stretcher bond
 - ii) Front view of rubble wall (4 marks)
- c) Outline the roles of building inspector (4 marks)
- d) Ketch the following
- i) Rear elevation of ledged and battened
 - ii) Ledged and braced (6 marks)

