



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY

Department of BUILDING & Civil engineering

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

ECV 4516 CONSTRUCTION TECHNOLOGY

END OF SEMESTER EXAMINATION

SERIES: APRIL 2025

TIME: 2 HOURS

PAPER A

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) 30 Marks

- a) With the aid of sketches explain the following;
 - i) Strip foundation
 - ii) Wide strip foundation
 - iii) Stepped strip foundation (6 marks)
- b) Explain the procedure of producing fresh concrete for constructing work (10 marks)
- c) With the aid of a sketch explain the plastering of a block wall (10 marks)
- d) State four factors to consider in construction site to prevent accidents (4 marks)

ANSWER ANY TWO QUESTIONS FROM THIS SECTION

QUESTION TWO (20 Marks)

- a) Explain the Workers compensation Act as used in construction (8 marks)
- b) Use a sketches to explain the load distribution on a stretcher bonded wall (8 marks)
- c) Name the constituents of concrete (4 marks)

QUESTION THREE (20 Marks)

- a) With the aid of a sketch explain the construction of a septic tank (10 marks)
- b) Sketch the following
 - i) Collar roof
 - ii) Couple roof
 - iii) Lean - to - roof (6 marks)
- c) State four qualities of good form work (4 marks)

QUESTION FOUR (20 Marks)

- a) With aid of a sketch explain the construction of a fireplace (10 marks)
- b) With the aid of a sketch explain the setting out of a rectangular building using the 3 : 4 : 5 method (6 marks)
- c) Name four types of masonry bonds (4 marks)

QUESTION FIVE (20 Marks)

- a) With the aid of a sketch explain the need of scaffolds in construction (8marks)
- b) Sketch the following;
 - i) Quarter landing stair
 - ii) Dog leg stair
 - iii) Open newel stair (6marks)
- c) Outline the roles of the following professionals in a building site (6 marks)

