



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF BUILDING & CIVIL ENGINEERING
UNIVERSITY EXAMINATION FOR:

BACHELOR OF TECHNOLOGY IN CIVIL ENGINEERING

TCV 4313: CONSTRUCTION TECHNOLOGY III

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

- Define plastering and explain the functional requirements of a good plaster. (6 marks)
- List and briefly explain four different types of partition walls based on materials used in construction. (8 marks)
- Explain the process of surface preparation before applying plaster on walls and why it is crucial. (6 marks)

ANSWER ANY TWO QUESTIONS FROM THIS SECTION

QUESTION TWO (20 Marks)

- Discuss the advantages and disadvantages of concrete floors compared to timber floors in residential buildings. (10 marks)
- Explain the purpose of a damp-proof membrane in ground floors and how it is installed. (6 marks)



- c) List and briefly describe two common types of floor finishes used for high-traffic areas. (4 marks)

QUESTION THREE (20 Marks)

- a) Compare precast concrete floors with in-situ concrete floors in terms of installation, cost, and flexibility in design. (10 marks)
- b) Explain the steps involved in laying a bonded screed on a concrete floor, including surface preparation and bonding agents. (6 marks)
- c) Briefly explain the purpose of strutting in suspended timber floors and when it is required. (4 marks)

QUESTION FOUR (20 Marks)

- a) Explain the process of applying paint to a plastered wall, focusing on surface preparation and the role of primers. (10 marks)
- b) List and describe the components of paint and their roles in achieving a durable finish. (6 marks)
- c) What are the advantages of using gypsum plaster for decorative ceilings? (4 marks)

QUESTION FIVE (20 Marks)

- a) Describe the design considerations for constructing a staircase in a commercial building, focusing on safety and accessibility. (10 marks)
- b) Explain the tile cutting process and the tools used for cutting tiles during installation. (6 marks)
- c) What are the benefits of using porcelain tiles over ceramic tiles for flooring? (4 marks)

