



# TECHNICAL UNIVERSITY OF MOMBASA

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

BACHELOR OF TECHNOLOGY IN CIVIL ENGINEERING

**TCV 4313: CONSTRUCTION TECHNOLOGY III**

END OF SEMESTER EXAMINATION

**SERIES: JANUARY 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.**

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## **QUESTION ONE (COMPULSORY) 20 Marks**

- a) Define partition walls and differentiate between load-bearing and non-load-bearing walls. (4 marks)
- b) List three types of brick partition walls and briefly explain their construction. (6 marks)
- c) Explain five common plastering defects, their causes, and remedies. (10 marks)

## **ANSWER ANY TWO QUESTIONS FROM THIS SECTION**

### **QUESTION TWO (20 marks)**

- a) Discuss the functional requirements of floors, focusing on strength and stability, damp resistance, and sound insulation. (10 marks)
- b) Explain the difference between suspended concrete floors and solid ground floors and provide examples of each. (6 marks)
- c) Briefly describe the purpose of hardcore in ground floor construction. (4 marks)

### **QUESTION THREE (20 Marks)**

- a) Describe the function of strutting in timber suspended upper floors and differentiate between herringbone strutting and solid strutting. (6 marks)
- b) Discuss the process of laying a floating screed and explain its application in underfloor heating systems. (10 marks)



- c) Explain the difference between bonded screed and unbonded screed. (4 marks)

#### **QUESTION FOUR (20 Marks)**

- a) Discuss the advantages and disadvantages of using gypsum ceilings compared to PVC ceilings in modern construction. (10 marks)
- b) List the four main components of paint and briefly describe their functions. (4 marks)
- c) Explain the role of binders in paint composition and differentiate between oil-based binders and latex-based binders. (6 marks)

#### **QUESTION FIVE (20 Marks)**

- a) Explain the design considerations for a staircase in a residential building, focusing on rise, going, and pitch. (10 marks)
- b) Describe the tile installation process, including surface preparation and adhesive application. (10 marks)

