



TECHNICAL UNIVERSITY OF MOMBASA

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

BACHELOR OF TECHNOLOGY IN CIVIL ENGINEERING

TCV 4226: CONSTRUCTION TECHNOLOGY II

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: MARCH 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) You are tasked with evaluating the construction of a school building that uses coursed rubble masonry for the walls.
 - i. Describe the key quality checks you would conduct to ensure the masonry work is up to standard. (6 marks)
 - ii. How would you handle any defects found in the masonry, such as gaps or misaligned stones? (4 marks)

- b) Explain the construction process of a masonry arch, including the role of key components such as voussoirs, keystone, and centering. Discuss the importance of precision in masonry arch construction and the potential consequences of poor workmanship. (10 Marks)

ANSWER ANY TWO QUESTIONS FROM THIS SECTION

QUESTION TWO (20 marks)



TUM is ISO 9001:2015 Certified

- a) Compare the advantages and disadvantages of flat and pitched roofs in building design, considering factors like climate, cost, and functionality. (10 Marks)
- b) Explain the different types of doors based on their method of construction, and describe the features of panel doors and flush doors. (10 Marks)

QUESTION THREE (20 Marks)

- a) List and briefly three types of windows based on their position
- b) What is the difference between wet and dry installation methods for stone cladding? (5 Marks)
- c) List three types of wall cladding materials and briefly describe one. (5 Marks)

QUESTION FOUR (20 Marks)

- a) What is the primary function of earth-moving equipment in construction? Give examples of earth-moving equipment. (5 Marks)
- b) What are the key features of bulldozers that make them useful in construction? (5 Marks)
- c) Discuss the different types of rollers used in road construction. Include their specific uses and advantages. (10 Marks)

QUESTION FIVE (20 Marks)

- a) Explain the different types of dump trucks used in construction and discuss their advantages and limitations. (10 Marks)
- b) Sketch and label the components of a conventional pitched roof. (10 Marks)

