



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF BUILDING & CIVIL ENGINEERING
UNIVERSITY EXAMINATION FOR:
BACHELOR OF SCIENCE IN CIVIL ENGINEERING
ECV 4121: INTRODUCTION TO CIVIL ENGINEERING
END OF SEMESTER EXAMINATION

SERIES: APRIL – MAY 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 and ANY OTHER TWO questions.
- Do not write on the question paper.

QUESTION ONE (COMPULSORY) (30 marks)

- (a) Briefly discuss the field of Civil Engineering which is also known as “Mother of all branches of engineering”. (6 marks)
- (b) All construction structures are composed of various types of materials either referred to as building materials or, materials of construction. Mention and explain the role of five key and most commonly used building materials. (6 marks)
- (c) i. What is Infrastructure? How does it relate with Civil Engineering? (3 marks)
ii. What is the influence of infrastructural growth on the development of a country? (3 mks)

- (d) Explain the role of Construction Technology and Management in Civil Engineering. (4 mks)
- (e) Justify the future growth of the civil engineering profession and how it is even posed to grow further with time. (8 marks)

ATTEMPT ANY TWO QUESTIONS IN THIS SECTION

QUESTION TWO

- (a) Briefly discuss FIVE key branches of Civil Engineering. (10 Marks)
- (b) Describe the relationship between civil engineering and allied fields of engineering. (10 Mks)

QUESTION THREE

- (a) Mention the two main professional organizations associated with civil engineering in Kenya and briefly explain their individual roles. (10 marks)
- (b) Discuss the different classes of registration and list the registration requirements for the organizations identified in Q3 (a) above. (10 marks)

QUESTION FOUR

- (a) A civil engineer is a person highly regarded by the society. What does the Civil Engineer do on a day-to-day basis? (10 marks)
- (b) Discuss the role of economics in civil engineering. (10 Marks)

QUESTION FIVE

- (a) List six “GOOD EFFECTS” and four “ILL EFFECTS” in the development of infrastructure. (10 marks)
- (b) In modern civil engineering practice, the under-listed software tools have become almost indispensable. Briefly discuss and explain their application.
- i. Auto CAD
 - ii. Civil 3D
 - iii. Revit
 - iv. STAAD Pro
 - v. Primavera P6
- (10 marks)

