



TECHNICAL UNIVERSITY OF MOMBASA

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

DIPLOMA IN CIVIL ENGINEERING
DCE 2108 : GENERAL BUILDING CONSTRUCTION I

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 any **THREE** questions.

Do not write on the question paper.

QUESTION ONE (20 Marks)

- (a) Outline FOUR situations where raft foundations can be used (4 Marks)
- (b) Explain the procedure of setting out a building (6 Marks)
- (c) Define the roles of the following Professionals in a construction project
 - (i) Structural Engineer
 - (ii) Mechanical Engineer
 - (iii) Architect
 - (iv) Quantity Surveyor
 - (v) Civil Engineer (10 Marks)

QUESTION TWO (20 Marks)

- (a) Outline FIVE factors considered in a site investigation by a Contractor (5 Marks)
- (b) Briefly explain FOUR methods of carrying out soil investigation (6 Marks)
- (c) Define and sketch the following
 - (i) Chain link fence
 - (ii) Vertical hoarding (9 Marks)

QUESTION THREE (20 Marks)

- (a) Briefly explain the evolution of the built environment (6 Marks)
- b) Outline THREE reasons for carrying out underpinning works (6 Marks)
- c) Describe with aid of a sketch, the open boarded type of timbering (8 Marks)

QUESTION FOUR (20 Marks)

- (a) Define the following construction terms
 - (i) Dewatering
 - (ii) Underpinning
 - (iii) Settlement (6 Marks)
- (b) Briefly explain THREE factors affecting choice of a foundation (6 Marks)
- (c) Sketch and label the following types of foundation
 - (i) Strip foundation
 - (ii) Flat slab raft foundation (8 Marks)

QUESTION FIVE (20 Marks)

- (a) Explain THREE factors considered in selection of a building site (6 Marks)
- (b) Illustrate TWO methods of temporary site dewatering (6 Marks)
- (c) Briefly explain the FOUR stages of a building process (8 Marks)