



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 1

END OF SEMESTER EXAMINATION
SERIES: APRIL 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) Illustrate the following methods of site dewatering
- (i) Sump pumping
 - (ii) Well point system (6 Marks)
- b) Outline SIX factors considered in selection of an excavation method (6 Marks)
- c) With aid of a sketch, describe the continuous wall underpinning method (8 Marks)

QUESTION TWO (20 Marks)

- (a) Explain the importance of Site organization to a contractor (6 Marks)
- (b) Outline THREE reasons for carrying out underpinning works (6 Marks)

- (c) Define and sketch the following types of foundation
- (i) Simple strip foundation
 - (ii) Pad foundation
- (8 Marks)

QUESTION THREE (20 Marks)

- (a) Explain the functions of the following professionals in a construction project
- (i) Civil Engineer
 - (ii) Electrical Engineer
 - (iii) Mechanical Engineer
 - (iv) Architect
 - (v) Quantity Surveyor
 - (vi) Structural Engineer
- (6 Marks)
- (b) Explain the THREE factors affecting the choice of a foundation
- (6 Marks)
- (c) Briefly explain the construction of a strip foundation
- (8 Marks)

QUESTION FOUR (20 Marks)

- (a) Outline FIVE factors considered in selection of a building site
- 5 Marks)
- (b) Briefly explain THREE activities carried out during site clearance
- (6 Marks)
- (c) Briefly explain the evolution of the built environment
- (9 Marks)

QUESTION FIVE (20 Marks)

- (a) Define the following terms as used in construction works
- (i) Artificial foundation
 - (ii) Natural foundation
 - (iii) Settlement
 - (iv) Bearing pressure
- (6 Marks)
- (b) Describe THREE levelling techniques used on sites
- (6 Marks)
- (c) Explain the procedure of setting out a building
- (8 Marks)