



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: AUGUST 2024
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) Define the following construction terms
 - i. Bearing pressure
 - ii. Natural foundation
 - 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. Pad foundation (8 marks)

QUESTION TWO (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 THREE (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) Describe with aid of sketch, the construction of a typical hoarding (9 marks)

QUESTION FOUR (20 Marks)

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

QUESTION FIVE (20 Marks)

- a) Define the following timbering terms
 - i. Struts
 - ii. Wedges
 - iii. Waling board
 - iv. Poling board (6 marks)
- b) Briefly explain THREE reasons for carrying out underpinning works (6 marks)
- c) Describe with aid of a sketch, timbering as carried out in moderately firm soil (8 marks)