



TECHNICAL UNIVERSITY OF MOMBASA

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

DIPLOMA IN CIVIL ENGINEERING
DCE 2302: GENERAL BUILDING CONSTRUCTION III

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) Explain SIX functional requirements of a roof (6 Marks)
- (b) Discuss any FIVE common types of roof covering (5 Marks)
- (c) Outline with aid of sketches, the typical parts of a roof (9 Marks)

QUESTION TWO (20 Marks)

- (a) Explain THREE disadvantages of a monolithic R.C upper floors (6 Marks)
- (b) Discuss the construction of a composite floor (6 Marks)
- (c) Briefly explain the construction of a flat reinforced concrete roof (8 Marks)

QUESTION THREE (20 Marks)

(a) With aid of a sketch, define the following staircase terminologies

- (i) Going
 - (ii) Waist
 - (iii) Newel post
 - (iv) Tread
 - (v) Rise
- Marks)

(5

(b) Explain THREE functional requirements of a stair

(6 Marks)

(c) With aid of a sketch, explain the construction of 3 steps for a timber stairs (9 Marks)

QUESTION FOUR (20 Marks)

(a) Given total rise of straight flight stair in a domestic building = 3000mm, the total going given = 3360mm, the tread size = 230mm. Calculate the no and size of risers. (6 Marks)

(b) Explain THREE disadvantages of a suspended timber ground floor (6 Marks)

c) Explain FOUR factors considered in design of stairs (8 Marks)

QUESTION FIVE (20 Marks)

(a) Explain by use of sketches, THREE types of roof styles (6 Marks)

(b) Outline factors considered in designing a roof drainage (6 Marks)

(c) Briefly explain the construction of an in situ R.C stair (8 Marks)