



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & BUILT ENVIRONMENT

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN ARCHITECTURE

EAR 2208: BUILDING TECHNOLOGY III

SPECIAL SUPPLEMENTARY EXAMINATION

YEAR TWO SEMESTER TWO

SERIES: JULY,2025

TIME: 2 HOURS

DATE: JULY,2025

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 (Compulsory) and any other TWO questions.

Do not write on the question paper.

QUESTION ONE (30 MARKS)-COMPULSORY

- a) Define the following terminologies.
 - i. Pile foundation. (2 marks)
 - ii. Facings. (2 marks)
 - iii. Portal frames. (2 marks)
- b) Describe TWO differences between shallow foundations and deep foundations. (4 marks)
- c) Name FOUR methods of ground water control. (4 marks)
- d) Explain THREE types of structures. (6 marks)
- e) List FIVE types of paint finishes. (5 marks)

- f) With the aid of a diagram, describe the connection between a universal column and a concrete footing base. (5 marks)

QUESTION TWO (15 MARKS)

- a) State FIVE benefits of concrete framed building. (5 marks)
b) Using appropriate drawings, describe FOUR types of concrete structural forms. (10 marks)

QUESTION THREE (15 MARKS)

- a) List FIVE factors to consider when selecting a method of excavation. (5 marks)
b) Describe FOUR methods used to protect the sides of a cut in deep excavation. (10 marks)

QUESTION FOUR (15 MARKS)

Using well annotated sketches, draw the following steel section connections

- a) Universal column to universal column. (3 marks)
b) Universal column to universal beam. (3 marks)
c) Universal beam to square hollow section column. (3 marks)
d) Two box channels welded back to back to Castella beam. (3 marks)
e) Universal beam to universal beam. (3 marks)

QUESTION FIVE (15 MARKS)

- a) Name FIVE function of paints. (5 marks)
b) Describe FIVE defects of paints. (10 marks)