



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & BUILT ENVIRONMENT

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN ARCHITECTURE
DIPLOMA IN QUANTITY SURVEYING
EAR 2106 BUILDING TECHNOLOGY I

END OF SEMESTER EXAMINATION

YEAR ONE SEMESTER TWO

SERIES: DECEMBER 2024

TIME: 2 HOURS

DATE: DECEMBER, 2024

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) Describe any THREE types of walls. (6 marks)
- b) Explain TWO causes of foundation failure. (4 marks)
- c) Apart from strength and stability, describe FIVE other functional requirements of floors. (10 marks)
- d) Describe THREE damp proof membrane placement positions. (6 marks)
- e) Define:
 - i. Building construction process. (1 mark)
 - ii. Leveling. (1 mark)
 - iii. Roofs. (1 mark)

iv. Cement screed.

(1 mark)

QUESTION TWO (15 MARKS)

- a) List FIVE functional requirements of a building. (5 marks)
- b) Describe the FIVE basic structural concepts or framing types and give ONE example of where they are used. (10 marks)

QUESTION THREE (15 MARKS)

- a) Using a clear diagram, showcase the major components of a suspended timber ground floor. (6 marks)
- b) Describe the THREE types of reinforced concrete upper floors. (6 marks)
- c) Apart from strength and stability, list THREE other functional requirements of floors. (3 marks)

QUESTION FOUR (15 MARKS)

- a) Define scaffolding. (2 marks)
- b) Describe TWO types of scaffolding used in construction. (4 marks)
- c) List THREE materials used for scaffolding. (3 marks)
- d) Describe the THREE major components of a scaffold. (6 marks)

QUESTION FIVE (15 MARKS)

- a) Name THREE factors affecting the design of a foundation. (3 marks)
- b) Define the term foundation. (2 marks)
- c) With the help of diagrams, describe FOUR types of strip foundation. (10 marks)