



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 2202: BUILDING TECHNOLOGY II
END OF SEMESTER EXAMINATION
YEAR TWO SEMESTER ONE

SERIES: DEC2024

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) Define the following terminologies.
- i. Basements. (2 marks)
 - ii. Retaining walls. (2 marks)
 - iii. Riser. (2 marks)
 - iv. Windows. (2 marks)
 - v. Handrail. (2 marks)
- b) List FIVE functions of a windows. (5 marks)
- c) List FIVE factors to consider when designing a retaining walls. (5 marks)

- d) Explain FIVE functional requirements of doors. (10 marks)

QUESTION TWO (15 MARKS)

- a) Define the term excavation. (1 mark)
b) Describe the common TWO methods of basements excavation. (4 marks)
c) Describe FIVE factors to consider when choosing the best excavation method. (10 marks)

QUESTION THREE (15 MARKS)

Underpinning is the reinforcing of an existing building foundation.

- i. Explain THREE conditions that may necessitate underpinning in construction. (3 marks)
ii. Describe THREE types of works for selection of underpinning methods. (6 marks)
iii. List SIX methods of underpinning. (6 marks)

QUESTION FOUR (15 MARKS)

- a) List FIVE factors to consider when selecting a wardrobe. (5 marks)
b) Describe FIVE types of wardrobes. (10 marks)

QUESTION FIVE (15 MARKS)

- a) With the aid of well annotated sketches, indicate the parts of a retaining wall. (3 marks)
b) Describe TWO types of retaining walls. (4 marks)
c) With the aid of sketches, describe FOUR modes of failure related to retaining walls. (8 marks)