

TECHNICAL



UNIVERSITY OF

MOMBASA

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

DIPLOMA IN CIVIL ENGINEERING

DCE 2103 WORKSHOP TECHNOLOGY (CARPENTRY AND MASONRY)
SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: NOVEMBER 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. Explain the purpose of site investigation 4 mark
- b. Outline the factors that determine demolitions 6 marks
- c. By the aid of a diagram explain the procedure of setting out a building using a site square
10 marks

QUESTION TWO (20 Marks)

- a. Sketch five common bonds used in brick work 10 marks
- b. Explain the purpose of any protective gear used in the workshop 10 marks

QUESTION THREE (20 Marks)

- a. Differentiate between the dead load and live load 4 marks
- b. Sketch the diagram a beam and slab foundation 5 marks
- c. Calculate the size of foundation given the following information
 - Bearing capacity of the ground 73KN/M²

- Wall thickness 210KN
- Total load on the foundation 24KN 11 marks

QUESTION FOUR (20 Marks)

- Outline functions of a wall 10 marks
- Draw a detailed section of a solid ground floor 10 marks

QUESTION FIVE (20 Marks)

- Outline functional requirements of a roof 5 marks
- Draw the following defects in timber,
 - heart shake,
 - star shake,
 - cup shake
 - upset 4 mark
- State five characteristics of a hardwood 5 mark
- Sketch the following types of joints
 - Dove tail
 - Lap joint
 - Tongue and groove 6 marks