



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ARCHITECTURE & BUILT ENVIRONMENT
UNIVERSITY EXAMINATION FOR:
DIPLOMA IN ARCHITECTURE
EAR 2204: CONSTRUCTION MATERIALS II
SPECIAL/SUPPLEMENTARY EXAMINATION
YEAR TWO SEMESTER ONE

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) State THREE reasons why tar is not considered an ideal construction material. (3 marks)
- b) List TWO non-sheet glass products and describe their use in construction. (2 marks)
- c) State the TWO primary types of rubber used in construction. (2 marks)
- d) Describe FIVE types of paint finishes you can employ in construction, for internal and external surfaces. (10 marks)
- e) Explain the difference between:
 - i. Tinted glass and reflective glass. (4 marks)
 - ii. Chromogenic glass and electrochromic glass (4 marks)
- f) List FIVE methods of molding plastic products. (5 marks)

QUESTION TWO (15 MARKS)

- a) Explain FIVE causes and defects observed in paints. (10 marks)
- b) Outline FIVE properties of quality lime that make it a good construction material. (5 marks)

QUESTION THREE (15 MARKS)

- a) List FIVE benefits of using gypsum board in construction (5 marks)
- b) Your client wants to construct a Resort in Mombasa. Describe FIVE ways you would use bituminous materials in the project. (10 marks)

QUESTION FOUR (15 MARKS)

- a) Explain the difference in properties and use between:
 - i. Sprit varnish and oil varnish (4 marks)
 - ii. Turpentine varnish and oil varnish (4 marks)
- b) List TWO factors that affect the curing process of varnish (2 marks)
- c) State FIVE functions of paint. (5 marks)

QUESTION FIVE (15 MARKS)

List FIVE ingredients used in the manufacture of rubber products and describe the properties gained from each ingredient. (15 marks)