



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
END OF SEMESTER EXAMINATION
YEAR TWO SEMESTER ONE
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) State the properties of quality **Paint**. (5 marks)
- b) State FIVE reasons why you may not recommend plastic as an ideal construction material. (5 marks)
- c) State FIVE advantages of using **Gypsum** as a building material (5marks)
- d) Describe the solvent you would recommend for varnish to form a hard and durable surface for external application. (1 mark)
- e) State the FOUR types of varnish and the solvent used for each. (4 marks)
- f) Explain FIVE properties of rubber that make it an ideal construction material (10 marks)

QUESTION TWO (15 MARKS)

- a) Explain FIVE common processes of manufacturing plastic products. (10 marks)
- b) List FIVE qualities that cement mortar and concrete gain when you add rubber into the mix (5 marks)

QUESTION THREE (15 MARKS)

- a) State FIVE ways you would employ laminated glass in construction. (5 marks)
- b) Describe FIVE uses of bituminous materials in construction. (10 marks)

QUESTION FOUR (15 MARKS)

- a) Outline FOUR main classifications of paint products based on their properties. (8marks)
- b) List FOUR common methods of applying paint. (4 marks)
- c) List THREE uses of glass in the construction industry. (3 marks)

QUESTION FIVE (15 MARKS)

- a) State TWO MAIN factors you would consider before recommending the THICKNESS of glass panels in a construction project. (2 marks)
- b) State THREE conditions where you would recommend heat-treated glass over annealed glass (3 marks)
- c) A client has approached you to consult on glass types for her commercial building. EXPLAIN how you would employ the following glass options in her project.
 - i. Fritted Glass (2 marks)
 - ii. Tinted Glass (2 marks)
 - iii. Reflective Coated Glass (2 marks)
 - iv. Self-Cleaning Glass (2 marks)
 - v. Fire rated glass (2 marks)