



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR**

FOURTH YEAR SECOND SEMESTER EXAMINATIONS

**FOR THE DEGREE
OF
BACHELOR OF TECHNOLOGY EDUCATION
IN BUILDING AND CIVIL TECHNOLOGY**

COURSE CODE: TEB 224

**COURSE TITLE: CONSTRUCTION MATERIALS AND
EQUIPMENT**

DATE: 26TH APRIL 2023

TIME: 8 – 10 A.M

INSTRUCTIONS:

1. This paper contains FOUR Questions
2. Answer Question ONE and any other TWO Questions
3. Marks for each question are indicated in the parenthesis.
4. It is in the best interest of the student to write legibly
5. Examination duration is **2 Hours**

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 3 Printed Pages. Please Turn Over.

Question 1 (30 marks)

- (a) Outline THREE classes of rocks that make building stones. State any FOUR qualities of good building stones. *(10 marks)*
- (b) What is the importance of curing concrete? Explain THREE methods commonly applied for curing concrete. *(10 marks)*
- (c) Differentiate between hardwoods and soft woods. What are the factors considered in the selection of structural timber? *(10 marks)*

Question 2 (20 marks)

- (a) Explain the difference between thermoplastics and thermosetting polymers. *(5 marks)*
- (b) What is an alloy? Give examples of FOUR types of alloys commonly used in the construction industry. *(7marks)*
- (c) State FOUR functions of paints in the construction industry. *(4 marks)*
- (d) List FOUR types of glass available in the market citing their application. *(4 marks)*

Question 3 (20 marks)

- (a) Explain the term "seasoning of timber". Outline FOUR methods of seasoning timber. *(10 marks)*
- (b) With the aid of neat illustrations describe briefly FIVE common defects occurring in timber. *(5 marks)*
- (c) What is the use of admixtures in concrete? Give some examples of admixtures. *(5 marks)*

Question 4 (20 marks)

- (a) The construction of building and civil engineering projects involves the use of heavy plants and machinery. With the aid of neat sketches show any FIVE of these machines citing their application. *(10 marks)*
- (b) State the safety and health measures that should be taken on site in order for workers to remain safe. *(5 marks)*
- (c) Explain the term 'Ergonomics' as applied in the workplace. *(5 marks)*
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