



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

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2021 / 2022 ACADEMIC YEAR**

**FOURTH YEAR SPECIAL AND SUPPLEMENTARY
EXAMINATIONS**

**FOR THE DEGREE
OF
BACHELOR OF SCIENCE IN CIVIL AND STRUCTURAL
ENGINEERING,
BACHELOR OF TECHNOLOGY EDUCATION IN BUILDING
AND CIVIL TECHNOLOGY AND
BACHELOR OF TECHNOLOGY IN BUILDING CONSTRUCTION**

COURSE CODE: CSE 461 / TEB 461

**COURSE TITLE: CONSTRUCTION MANAGEMENT /
CONSTRUCTION PLANNING AND
MANAGEMENT**

DATE: 5TH OCTOBER 2022

TIME: 9 – 11 A.M

INSTRUCTIONS:

1. This paper contains **FOUR** questions
2. Answer question **ONE** (compulsory) and any other **TWO** question
3. Marks for each question are indicated in the parenthesis.
4. Examination duration is **2 Hour**

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over.

Answer Question 1 and any other two questions.

QUESTION 1 (30 Marks)

- (a) By use of a neat illustration explain the main phases of a project life cycle. (10 marks)
- (b) Outline the principal functions of project management. (10 marks)
- (c) Discuss the Financial and Non-financial incentives that can be offered to workers in construction projects. (10 marks)

QUESTION 2 (20 Marks)

- (a) In the implementation of civil engineering projects various contract methods are applied. Discuss these methods. (10 marks)
- (b) State the main tender documents applied in the execution of construction projects. (4 marks)
- (c) Define the term depreciation. State FOUR methods for depreciation of plants. (6 marks)

QUESTION 3(20 Marks)

- (a) What is stock taking? Explain the process of stock taking. (5 marks)
- (b) Differentiate between Surety bond and Performance bond in construction contracts. (5 marks)
- (c) What is the role of the following staff in a construction project? (i) Project manager (ii) Site agent (iii) Clerk of Works (iv) General Foreman (v) Foreman (10 marks)

QUESTION 4 (20 Marks)

- (a) Give examples of circumstances that allow a contractor to request for extension of contract time. (5 marks)
- (b) What are Variation Orders (VO) in a Bill of Quantities? Give examples of such items. (5 marks)
- (c) From the following bill item extracted from the BQ of the Proposed Engineering and TVET complex in MMUST, compute the unit rate:
"Excavate to reduced levels average th. 150mm and cart away to a distance not exceeding 100m from site"

Assume the following:

Capacity of tractor shovel = 10m³

Allowance for bulking = 25%

Round trip time for tractor shovel = 15 min

Cost of tractor shovel per hour = Kshs.8,000/= (wet rate)

Make any other suitable assumptions.

(10 marks)