



**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 IN BUILDING
CONSTRUCTION**

COURSE CODE: BTB 442

COURSE TITLE: BUILDING SERVICES & MAINTENANCE

DATE: 19TH APRIL, 2023

TIME: 8 – 10 A.M

INSTRUCTIONS:

1. This paper contains FOUR questions
2. **Question ONE (1) is Compulsory**
3. **Attempt a total of three (3) questions in this booklet.**
4. Marks for each question are indicated in the parenthesis.

Examination duration is **2 Hours**

MMUST observes ZERO tolerance to examination cheating

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

QUESTION 1 (30 marks)

- a) Discuss **Three (3)** reasons why it is important to monitor the efficiency of Heating Ventilation and Air Conditioning systems(HVACs) and further discuss any **Five (5)** ways on how to minimize/avoid their ecological footprints **(16 marks)**.
- b) Discuss the importance of thermal comfort in buildings and further discuss any **Six (6)** factors that affect comfort of occupant's thermal environment in buildings **(14 marks)**.

QUESTION 2 (20 marks)

- a) Describe any **Seven (7)** best practices you can propose in order for an organization to build and implement a robust occupational health and safety culture **(14 marks)**.
- b) Describe **Two (2)** types of accidents likely to occur during building maintenance, giving the causes and the possible tips for prevention **(6 marks)**.

QUESTION 3 (20 marks)

- a) Describe the critical provisions of Kenya's Environmental Management and Co-ordination Act (EMCA) of 1999 amendment 2015 with regard to waste management **(4 marks)**
- b) Explain **Six (6)** ways of how to implement a facility health and safety plan **(12 marks)**.
- c) Explain **Four (4)** reasons why facility management is necessary **(4 marks)**.

QUESTION 4 (20 marks)

- a) As a newly appointed facility manager for a large commercial facility, describe **Four (4)** types of inspection that you would recommend the owner for adoption in order to effectively manage the facility **(8 marks)**.
- b) Explain any **Six (6)** common facilities management challenges for facility managers and their solutions **(12 marks)**.

END