



(University of Choice)

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

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR**

SECOND YEAR SEMESTER ONE EXAMINATIONS

**FOR THE DEGREE
OF
BACHELOR OF TECHNOLOGY EDUCATION (BUILDING AND
CIVIL TECHNOLOGY)**

COURSE CODE: TEB 213

**COURSE TITLE: CONSTRUCTION TECHNOLOGY &
PRACTICE 1**

DATE: FRIDAY 17TH JANUARY 2020 TIME: 3.00 – 5.00 PM

INSTRUCTIONS:

1. This paper contains FIVE questions
2. QUESTION ONE IS COMPULSORY
3. Attempt any other Two questions
4. Marks for each question are indicated in the parenthesis.

Examination duration is **2 Hour**

MMUST observes ZERO tolerance to examination cheating

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

QUESTION ONE

- a) Outline the roles of the following professionals in the construction industry;
- i) Project manager
 - ii) Site agent
 - iii) General foreman
 - iv) Site clerk (8marks)
- b) State FOUR purposes of site investigation (6marks)
- c) Give an outline of the bulldozer as a construction equipment, stating its main functions (8marks)
- d) Cobbles and setts can be used for paving. Give an outline of these materials (8marks)

QUESTION TWO

- a) Give an outline of cantilever retaining wall, sketching the THREE normal variants. (9marks)
- b) Outline the following demolition methods;
- i) piecemeal
 - ii) Pusher arm
 - iii) Impact hammer
 - iv) Overturning (8 marks)
- c) Distinguish between rubble built to courses and coursed squared rubble stone walling. (3 marks)

QUESTION THREE

- a) Outline factors influencing choice of roof types (6 marks)
- b) With the aid of sketches, distinguish between a dog leg and an open well stairs (14 marks)

QUESTION FOUR

- a) Give a well annotated sketch of a formwork you would use if you were to put up a square column for a building (10 marks)
- b) The external walls of block or timber frame construction can be clad with plain tiles. With a well annotated sketch, show such a cladding. (6 marks)
- c) Outline the following excavation timbering components;
- i) Polling boards
 - ii) Runners (4 marks)

QUESTION FIVE

- a) Give an outline of portal frames in general (5 marks)
- b) With the aid of well annotated sketches, distinguish between a multi-span steel portal frame and a multi-span precast concrete portal frame (5marks)
- c) Sketch the following in a precast concrete portal frame;
- i) Typical apex or crown hinge details
 - ii) Typical foundation connection hinge details (10marks)

