



**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY**

**(MMUST)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS**

**2021/2022 ACADEMIC YEAR**

**SECOND YEAR SECOND SEMESTER EXAMINATIONS**

**FOR THE**

**DIPLOMA**

**IN**

**CIVIL ENGINEERING**

**COURSE CODE: DCE 066**

**COURSE TITLE: CIVIL ENGINEERING CONSTRUCTION**

**DATE: FRIDAY 22<sup>ND</sup> APRIL 2022 TIME: 8.00AM -10.00AM**

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**INSTRUCTIONS:**

- a) Answer Question **ONE** and any other **TWO** Questions
- b) Marks for each question are indicated in the parenthesis.
- c) Examination duration is **2 Hours**
- d) Use of Mobile phones is **NOT ALLOWED** in the examination room.

MMUST observes **ZERO** tolerance to examination cheating.

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

**QUESTION ONE – COMPULSORY (30 MARKS)**

- a) Highlight TWO building code requirement for foundation [2 Marks]
- b) Explain any THREE method of demolition [6 Marks]
- c) State any THREE factors to consider in design and choice of particular foundation [3Marks]
- d) State THREE situation that necessitate the use of pile foundation [3Marks]
- e) Explain any TWO method used in timbering [4 Marks]
- f) Discuss FOUR objective of dewatering. [2 Marks]
- g) State and label each of the following type of foundation stating where each is used [8 Marks]
  - i) Deep strip foundation
  - ii) Raft foundation

**QUESTION TWO (20 Marks)**

- a) Explain the term dam failure [1Marks]
- b) State THREE negative effects of dams on the environment [4 Marks]
- c) Explain THREE causes of retaining wall failure [9 Marks]
- d) Explain any THREE type of caissons [6 Marks]

**QUESTION THREE (20 Marks)**

- a) Explain the term building services [1 Mark]
- b) Name any FIVE factors considered while designing drainage works [5 Marks]
- c) With aid of sketch describe working principal of a septic tank [8 Marks]
- d) Describe any TWO floor finishes [6 Marks]

**QUESTION FOUR (20 Marks)**

- a) What is a waterfront structure [1 Marks]
- b) Describe three types of water front structure [9 Marks]
- c) Describe a labeled section through a railway line [7 Marks]
- d) Explain the function of each of the following parts of a railway truck [3 Marks]
  - i) Sleeper
  - ii) Ballast
  - iii) Sub-grade

**QUESTION FIVE (20 Marks)**

- a) What is a retaining Wall [1 Mark]
- b) Describe any THREE type of retaining walls [9 Marks]
- c) State FOUR stability requirement of a retaining wall [2 Marks]
- d) Briefly describe the common materials used for holding walls [8 Marks]