



(University of Choice)

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

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2015/2016 ACADEMIC YEAR**

FIRST YEAR SECOND SEMESTER EXAMINATIONS

**FOR THE DIPLOMA
IN
CIVIL AND STRUCTURAL ENGINEERING**

COURSE CODE: DCE 062

COURSE TITLE: BUILDING TECHNOLOGY

DATE: WEDNESDAY 9TH DECEMBER 2015 TIME: 9.00 – 11.00 PM

INSTRUCTIONS:

1. This paper consists of **FOUR** Questions
2. Answer Question One and any other **Two** Questions
3. Examination duration is **2 Hours**

MMUST observes **ZERO** tolerance to examination cheating

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

QUESTION 1 [Compulsory)

- a) List four requirements that should be fulfilled while planning and constructing a building. (4mks)
- b) Define the following terms as used in sewerage and storm water drainage (5mks)
 - (i) Sewerage
 - (ii) Sewage
 - (iii) Sanitary sewage
 - (iv) Sewer
 - (v) Combined sewer
- c) State four principles of planning a building for suitable utility. (4mks)
- d) State the two main parts of a modern building (2mks)
- e) Write the formula that is used to calculate the minimum depth of a foundation stating its physical parameters (5mks)
- f) State the ohms law (2mks)
- g) State four primary functions of stairs in a storey domestic house (4mks)
- h) Outline the objective of carrying out site investigation for new works (2mks)
- i) List two Kenya building code rules in regards to wall building (2mks)
- j) List down three basic elements of a building (3mks)
- k) State two crucial professionals in a multistoried building project (2mks)

QUESTION 2

- a) Define arches and briefly explain how arches are classified (4mks)
- b) State three types of roofs based on roof slope (3mks)
- c) Define the following terminologies as related to hipped and gable roofs. (3mks)
 - (i) Gable
 - (ii) Hipped end
 - (iii) Rise of the roof
- d) List four requirements of a well planned roof (4mks)
- e) Outline the primary function of any support over an opening (2mks)
- f) List down four typical arch formats (4mks)

QUESTION 3

- a) List down four essential requirements of a good foundation 4mks
- b) With the help of illustration describe three types of piles 9mks
- c) List three basic physical laws that are considered when planning or designing any water installation 3mks
- d) Outline the primary function of a window sill 2mks
- e) List four roof covering materials 2mks

QUESTION 4

- a) State four functional requirements of a ground floor 4mks
- b) With the help of neat sketches show the different stairs step formats and joints that can be used in a storey building. 9mks
- c) State and make brief notes on four sources of electricity 4mks
- d) State the three main classification of walls (3mks)