



MACHAKOS UNIVERSITY

University Examination 2018/2019

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

FIRST YEAR SECOND SEMESTER EXAMINATION FOR

DIPLOMA IN CIVIL ENGINEERING

BCECD 118 BUILDING TECHNOLOGY I

DATE: 7/5/2019

TIME: 2:00 – 4:00 PM

INSTRUCTIONS

- **This paper consists of FIVE questions**
- **Question ONE is compulsory and carries 30 marks**
- **Answer any other two questions which carry 20 marks**

QUESTION ONE (COMPULSORY)(30 MARKS)

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|----|--|-----------|
| a) | Briefly explain the evolution of the built environment | (5 marks) |
| b) | Outline the FOUR stages involved in the building process | (8 marks) |
| c) | Make a neat sketch of a corner profile board | (7 marks) |
| d) | State FOUR forms of walls | (8 marks) |
| e) | Define the term foundation | (2 marks) |

QUESTION TWO (20 MARKS)

- | | | |
|----|--|------------|
| a) | Differentiate between a door frame and a door lining | (4 marks) |
| b) | Make a neat sketch of FOUR types of match-boarded doors naming all the parts | (16 marks) |

QUESTION THREE (20 MARKS)

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|----|---|------------|
| a) | Differentiate between mass concrete and reinforced concrete | (4 marks) |
| b) | State two aims of setting out buildings | (4 marks) |
| c) | Make neat well labeled sketches of any THREE types of foundations | (12 marks) |

QUESTION FOUR (20 MARKS)

Make neat sketches of the following types of single roofs including their maximum spans

- i) Couple roof
- ii) Closed couple roof
- iii) Collar tie roof
- iv) Lean- to roof

QUESTION FIVE (20 MARKS)

- a) Briefly explain the 3: 4: 5 method of setting out buildings (10 marks)
- b) Sketch two methods of fixing window panes (6 marks)
- c) State FOUR functional requirements of ground floors (4 marks)