



TECHNICAL UNIVERSITY OF MOMBASA  
**Faculty of Engineering &  
Technology**

DEPARTMENT OF BUILDING & CIVIL ENGINEERING  
**CERTIFICATE IN BUILDING & CIVIL ENGINEERING**

EBC 1105: BUILDING TECHNOLOGY I

**END OF SEMESTER EXAMINATION**

SERIES: APRIL 2014

**TIME ALLOWED: 2 HOURS**

**Instructions to Candidates:**

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions. Answer any **THREE** questions of the **FIVE** questions

All questions carry equal marks

Maximum marks for each part of a question are as shown

Use neat, large and well labeled diagrams

This paper consists of **THREE** printed pages

### Question One

- a) Explain FOUR purpose of site clearance. **(4 marks)**
- b) Explain the following:
- (i) Demolition
  - (ii) Hand demolition
  - (iii) Builders square
  - (iv) Builders line
  - (v) Building line **(5 marks)**
- c) Sketch and label a corner profile. **(5 marks)**
- d) With aid of diagrams, illustrate how bored piles are fixed. **(6 marks)**

### Question Two

- a) Define the following terms: **(4 marks)**
- (i) Back filing
  - (ii) Timbering
  - (iii) Profile board
  - (iv) Arches
- b) With aid of sketch, explain procedure of setting out using a 3-4-5 method. **(10 marks)**
- c) With aid of a diagram describe a site square. **(4 marks)**

### Question Three

- a) State FIVE functional requirements of a wall. **(5 marks)**
- b) Name TWO types of walls **(2 marks)**
- c) Define the following: **(3 marks)**
- (i) Dead load
  - (ii) Life load
  - (iii) Foundation
- d) With aid of a diagram, explain procedure of setting out using a building square. **(10 marks)**

### Question Four

- a) What is scaffolding? **(2 marks)**
- b) Sketch and label the following scaffolding: **(10 marks)**
- (i) Dependent
  - (ii) Independent

c) Sketch FIVE types of stairs (5 marks)

d) State THREE factors to consider when erecting a scaffold (3 marks)

**Question Five**

a) State FIVE functions of a roof (5 marks)

b) Draw a section of roof members (10 marks)

c) Draw a mobile scaffold. (5 marks)