



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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

CERTIFICATE IN BUILDING (CTI)

EBC 11211: BUILDING TECHNOLOGY II

END OF SEMESTER EXAMINATION

SERIES: APRIL 2013

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

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

Question One

- a) With the aid of a sketch, explain the **INDIRECT** cold water supply system. **(6 marks)**
- b) Define the term “Back Siphonage” and explain how its prevented in indirect cold water system. **(10 marks)**
- c) State **TWO** advantages and **TWO** disadvantages of direct over indirect cold water supply. **(4 marks)**

Question Two

- a) Given the following data, design a suitable staircase for a hotel building:
- Floor to ceiling – 3000mm
 - Space between suspended ceiling – 300mm
 - Structural floor – 250mm
 - Screed 22mm
 - Parquette floor – 8mm
- (12 marks)**
- b) With the aid of a sketch, define the following terms:
- (i) Handrail
 - (ii) Balustrade
 - (iii) Riser
 - (iv) String
 - (v) Tread
 - (vi) Newel
 - (vii) Nosing
- (8 marks)**

Question Three

- a) State **THREE** factors that affect the choice of a door **(3 marks)**
- b) The sketch indicates a door lining, fitted with a flush door. Draw section A – A and name all parts. **(7 marks)**

- c) With the aid of a sketch, describe the construction of a framed, ledger, braced and battened door. **(10 marks)**

Question Four

- a) State **FIVE** factors that govern the selection of a window **(5 marks)**
- b) With the aid of a sketch, describe a horizontal pivoted window. **(2 marks)**
- c) The sketch 04 shows a paneled glazed window, with a 200 x 300mm ring beam on top and a 200mm thick wall at the bottom. Draw section A – A and name all parts. **(10 marks)**

Sketch 04

- d) Define a “Window” **(3 marks)**

Question Five

- a) With the aid of a sketch, differentiate between the following:
- (i) Butt and parliament hinges **(4 marks)**
 - (ii) Hasp and tower bolt **(4 marks)**
- b) State **FIVE** advantages of steel windows over timber. **(10 marks)**
- c) State **THREE** types of waste water. **(2 marks)**