



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

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

EBC 1107: BUILDING TECHNOLOGY I

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: OCTOBER 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

- *Scientific Calculator*

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 **TWO** printed pages

Question One (20 Marks)

- a) Explain the work of the **FOUR** personnel in the building team. **(10 marks)**
- b) With the aid of sketches, explain the procedure of setting out a rectangular building by using the 3:4:5 method. **(10 marks)**

Question Two (20 Marks)

- a) Explain the importance of soil investigation. **(10 marks)**
- b) With the aid of sketches, explain the following types of foundations.
- i) Strip foundation
 - ii) Pad foundation
- (10 marks)**

Question Three (20 Marks)

- a) Sketch and explain the parts of a solid ground floor. **(10 marks)**
- b) Explain the history of buildings. **(5 marks)**
- c) Name **FIVE** building materials used in your home area. **(5 marks)**

Question Four (20 Marks)

- a) State **FIVE** functional requirements of walls. **(5 marks)**
- b) Sketch the following types of walls.
- i) Cavity wall
 - ii) Random rubble wall
 - iii) Monolithic wall
- (10 marks)**
- c) Name **FIVE** factors that influence the choice of a floor finish. **(5 marks)**

Question Five (20 Marks)

- a) Explain any **FOUR** cause of failure of a building after construction. **(10 marks)**
- b) Explain the following terms:
- i) Curing
 - ii) Reinforced concrete
 - iii) Return wall
 - iv) Water-cement ratio
- (10 marks)**