



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of Jkuat)

Faculty of Engineering and Technology

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

DIPLOMA IN BUILDING & CIVIL ENGINEERING

EBC 2132: BUILDING TECHNOLOGY I

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2011

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 question **ONE (COMPULSORY)** from **SECTION A** and any other **TWO** questions from **SECTION B**

Maximum marks for each part of a question are clearly shown

This paper consists of **THREE** printed pages

SECTION A (COMPULSORY)

Question 1

- a) Sketch and label the parts of a profile board (10 marks)
- b) Sketch and plan of a rectangular building and indicate the position of the profile boards (5 marks)
- c) Explain the process of setting out a rectangular building using the 3:4:5 method (5 marks)
- d) Explain the role of each of the following
 - (i) Structural engineer
 - (ii) Quantity surveyor
 - (iii) Architect(10 marks)

SECTION B (Answer any TWO questions from this section)

Question 2

- a) Explain the importance of soil study in building technology (6 marks)
- b) Sketch and label the parts of a solid ground floor (8 marks)
- c) Outline the history of buildings (6 marks)

Question 3

- a) State **FOUR** functional requirement of a wall (4 marks)
- b) Explain the following types of foundations
 - (i) Strip
 - (ii) Pad
 - (iii) Pile(12 marks)
- c) Name **FOUR** types of floor finishers (4 marks)

Question 4

- a) Sketch the following types of walls
 - (i) Cavity wall
 - (ii) Monolithic
 - (iii) Rubble(12 marks)
- b) Define the following
 - (i) Concrete
 - (ii) Mortar
 - (iii) Cement grout
 - (iv) Blinding(8 marks)

Question 5

- a) Explain why reinforced concrete structures are becoming more popular than stone structures (10 marks)
- b) Sketch and label **FOUR** types of roofs (10 marks)