



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)
Faculty of Engineering and Technology

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

Institutional Based Program

BACHELOR OF ENGINEERING IN BUILDING & CIVIL ENGINEERING

EBC 4328: CONSTRUCTION TECHNOLOGY II

END OF SEMESTER EXAMINATION

SERIES: APRIL 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Drawing instruments*

This paper consists of **FIVE** questions in **TWO** sections **I & II**

Answer question **ONE (Compulsory)** and any other **TWO** questions

Maximum marks for each part of a question are clearly shown

This paper consists of **TWO** printed pages

SECTION I (Compulsory)

Question 1 (30 marks)

- a) Briefly describe the following components of built environment
- (i) Interiors
 - (ii) Landscapes
 - (iii) Structures (6 marks)
- b) Briefly describe **TWO** functional requirements for floors (5 marks)
- c) With the aid of sketches, illustrate the following down pipe accessories for rain water disposal
- (i) Straps
 - (ii) Shoes
 - (iii) Elbows
 - (iv) Outlets (10 marks)
- d) Outline **SIX** possible deficiencies in reinforced concrete frame construction in highrise buildings (9 marks)

SECTION II (Answer any TWO questions)

Question 2 (20 marks)

- a) State **FOUR** applications and benefits of steel framed load bearing walls (8 marks)
- b) With the aid of sketches, illustrate the following types of trusses. (12 marks)
- (i) Hipped
 - (ii) Lattice
 - (iii) Mansard
 - (iv) N-truss

Question 3 (20 marks)

- a) Briefly describe the construction method for the following types of floors (10 marks)
- (i) Mosaic floors
 - (ii) Monolithic floor finish concrete floor
- b) State **FIVE** situations where underpinning should be undertaken (10 marks)

Question 4 (20 marks)

- a) Describe the relationship of the following issues with the built environment (10 marks)
- (i) Technological issues
 - (ii) Environmental issues
- b) Describe the following types of maintenance giving an example in each case (10 marks)
- (i) Periodic repairs
 - (ii) Specific repairs

Question 5 (20 marks)

- a) State **FIVE** factors for insulating a roof with a dormer (10 marks)
- b) Briefly describe the laid out procedure for reporting accidents and dangerous occurrences in a construction site. (10 marks)