



# 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

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**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)