



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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING  
**CERTIFICATE IN BUILDING & CIVIL ENGINEERING (CBCE)**

EBC 1102: CIVIL ENGINEERING MATERIALS II

**END OF SEMESTER EXAMINATION**

SERIES: APRIL 2014

**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 of the **FIVE** questions

All questions carry equal marks

Maximum marks for each part of a question are as shown  
This paper consists of **TWO** printed pages

### Question One

- a) What is mortar? **(4 marks)**
- b) Outline FIVE uses of mortar? **(5 marks)**
- c) Give differential types of mortars **(4 marks)**
- d) Define asphalt briefly **(2 marks)**
- e) State FIVE properties of bitumen **(5 marks)**

### Question Two

- a) Define the following terms as used in adhesives **(6 marks)**
  - (i) Shelf life
  - (ii) Pot life
  - (iii) Closed assembly time
- b) Define the following terms: **(4 marks)**
  - (i) Pitch
  - (ii) Tar
- c) Give FIVE uses of tar **(5 marks)**
- d) Name FIVE properties of glass. **(5 marks)**

### Question Three

- a) Name FOUR different methods of making burnt lime **(4 marks)**
- b) Explain briefly ONE of the slaking method. **(6 marks)**
- c) Explain the following terms: **(10 marks)**
  - (i) Quick lime
  - (ii) Slaked lime
  - (iii) Fat lime
  - (iv) Hydraulic lime
  - (v) Poor lime

### Question Four

- a) Name TWO types of furnaces used in the manufacture of glass and explain them briefly. **(10 marks)**
- b) Name FIVE types of adhesives and give TWO examples in each. **(10 marks)**

### Question Five

a) Give EIGHT uses of glass

**(16 marks)**

b) Give FOOUR uses of bitumen

**(4 marks)**