



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

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

EBC 1103: CONSTRUCTION MATERIALS I

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: OCTOBER 2013

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

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

Question One

- a) State FOUR factors considered when selecting building materials (4 marks)
- b) (i) Briefly describe the THREE geological classes of rocks.
(ii) Give TWO examples of each class in (b) (i) above (12 marks)
- c) Define the following terms with reference to stones:
(i) Quarrying
(ii) Dressing (4 marks)

Question Two

- a) Outline FIVE uses of stones in construction (10 marks)
- b) Outline FIVE climatic agents that cause deterioration of building stone (10 marks)

Question Three

- a) Define the following terms as applied to timber:
(i) Standing timber
(ii) Green timber
(iii) Rough timber
(iv) Converted timber
(v) Structural timber (10 marks)
- b) Draw a horizontal cross-section of a tree trunk and label all parts (6 marks)
- c) State FOUR objectives of seasoning timber (4 marks)

Question Four

- a) State SIX advantages of timber as a construction material (6 marks)
- b) With the aid of sketches, briefly describe natural seasoning of timber (10 marks)
- c) With the aid of a sketch, illustrate the Radial saving method of timber conversion (4 marks)

Question Five

- a) Explain the process of making bricks (10 marks)
- b) State FOUR qualities of a good brick for building (10 marks)