



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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING  
**CERTIFICATE IN BUILDING & CIVIL ENGINEERING (CBCE 13M)**

EBC 1102: WORKSHOP TECHNOLOGY I

**SPECIAL/SUPPLEMENTARY EXAMINATION**

**SERIES: MARCH 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

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

### Question One

- a) (i) Define the term brickwork and masonry (4 marks)  
(ii) With the aid of sketches, show the difference between a trowel and a hawk (6 marks)
- b) List the names of FIVE joints which may be used in jointing pipes (10 marks)
- c) (i) Name THREE backsaws and handsaws used in woodwork (6 marks)  
(ii) Briefly state the difference between the terms carpentry and joinery (4 marks)

### Question Two

- a) Name FIVE bench equipments used in carpentry workshop stating the use of each. (10 marks)
- b) Sketch a beveled chisel and label all its parts (4 marks)
- c) Briefly describe TWO types of hand fire extinguishers that may be used in a workshop. (6 marks)

### Question Three

- a) State the FOUR purposes of a bond in brickwork. (8 marks)
- b) With the aid of sketches, show the following bonds in **FOUR** courses:  
(i) Header  
(ii) Stretcher  
(iii) English  
(iv) Flemish (12 marks)

### Question Four

- a) State the use of each of the following tools:  
(i) Reamer  
(ii) Diestock  
(iii) Mallet  
(iv) Hacksaw  
(v) Mandril (6 marks)
- b) Name **FOUR** examples of power tools used in plumbing (4 marks)
- c) List typical examples of defects that are usually found on the following tools:  
(i) Cold chisel  
(ii) Hammer  
(iii) File (6 marks)
- d) State FOUR safety rules as regards to a tidy workshop (4 marks)

### Question Five

a) Describe the following scaffold fittings:

- (i) Swivel coupler
- (ii) Double coupler
- (iii) Putlog coupler
- (iv) Base plate
- (v) Reveal pin

**(10 marks)**

b) With the aid of sketches, show FIVE types of widening joints used in woodwork

**(10 marks)**