



# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

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

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

**DIPLOMA IN BUILDING CONSTRUCTION**

EBC 2101: WORKSHOP TECHNOLOGY I

**SPECIAL/SUPPLEMENTARY EXAMINATION**

SERIES: MAY/JUNE 2012

**TIME: 2 HOURS**

## **Instructions to Candidates:**

You should have the following for this examination

- *Answer Booklet*
- *Scientific calculator*

This paper consists of **FIVE** questions in two sections **A & B**

Answer question **ONE** plus any **TWO** questions

Maximum marks for each part of a question are clearly shown

This paper consists of **THREE** printed pages

## SECTION A (Compulsory)

### Question 1 (30 marks)

- a) With the aid of sketches, show **TWO** types of the following:
- i) Widening joints (4 marks)
  - ii) Lengthening joints (4 marks)
  - iii) Name **TWO** types of hard and soft woods (2 marks)
- b) (i) State **ONE** advantage and disadvantage of block work over brickwork (2 marks)  
(ii) What are the **FOUR** purposes of a bond in brickwork (8 marks)
- c) (i) Name **THREE** types of joints used in pipe work (6 marks)  
(ii) State **FOUR** safety precautions to be observed when using power tools in plumbing (4 marks)

## SECTION B (Answer any TWO questions from this section)

### Question 2 (20 marks)

- a) Differentiate between the terms masonry and brickwork (4 marks)
- b) With the aid of neat labeled sketches describe a bat and clouser gauge stating its uses (8 marks)
- c) Give the difference between plastering and rendering (4 marks)
- d) State **FOUR** requirements of good mortar (4 marks)

### Question 3 (20 marks)

- a) Name **THREE** types of hand saws and metal planes used in woodworking (5 marks)
- b) With the aid of neat sketches show the difference between angle halving and tee halving joints (8 marks)
- c) Describe with sketches **THREE** types of nails and screws used in woodworking (6 marks)

### Question 4 (20 marks)

- a) Name **THREE** type of tools and equipments used in plumbing (6 marks)
- b) Sketch the following pipe fittings:
- i) Female and male elbow
  - ii) Return bend
  - iii) Hexagonal nipple (6 marks)
- c) Sketch and state the use of each of the following:
- i) Reamer
  - ii) Mallet
  - iii) Auger
  - iv) Hacksaw (8 marks)

**Question 5 (20 marks)**

- a) Name **FOUR** types of materials used in the manufacture of pipes (8 marks)
- b) What are the **FOUR** purposes of bonding brickworks (8 marks)
- c) Name **FOUR** power tools that may be used by a plumber (4 marks)