



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

DIPLOMA IN ARCHITECTURE

DIPLOMA IN BUILDING & CIVIL ENGINEERING

DIPLOMA IN CIVIL ENGINEERING

EBC 2127: WORKSHOP TECHNOLOGY I

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: OCTOBER 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. Answer any **THREE** questions
Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

Question One (20 Marks)

- a) State **FIVE** safety precautions to be observed in a workshop. **(5 marks)**
- b) State the **FIVE** constituents of reinforce concrete. **(5 marks)**
- c) Explain the processes of producing concrete. **(10 marks)**

Question Two (20 Marks)

- a) With the aid of sketches, explain the procedure of plastering a block wall using cement sand mortar. **(8 marks)**
- b) With the aid of sketches, differentiate the following hand tools,
 - i) Frenchman from jointer
 - ii) Plumb bob from Boat level
 - iii) Steel float from Darby float**(12 marks)**

Question Three (20 Marks)

- a) Explain the procedure of setting out a rectangular building. **(10 marks)**
- b) Explain the importance of soil study before building a house. **(10 marks)**

Question Four (20 Marks)

- a) Sketch and explain the domestic cold water supply system. **(10 marks)**
- b) Sketch the following:
 - i) Straight socket joint
 - ii) Male-female elbow
 - iii) Socket and spigot joint
 - iv) Wheel cutter
 - v) Flange joint**(10 marks)**

Question Five (20 Marks)

- a) Explain how a carpenter can be useful in the construction industry. **(10 marks)**
- b) Sketch the following timber joints.
 - i) Half lap joint
 - ii) Bird's mouth joint
 - iii) Dove tail joint
 - iv) Tongue and groove**(10 marks)**