



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of Jkuat)

Faculty of Engineering and Technology

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

DIPLOMA IN BUILDING & CIVIL ENGINEERING
DIPLOMA IN CIVIL ENGINEERING
DIPLOMA IN ARCHITECTURE

EBC 2127: WORKSHOP TECHNOLOGY I

END OF SEMESTER EXAMINATION

SERIES: AUGUST/SEPTEMBER 2011

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 question **ONE** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

SECTION A (COMPULSORY)

Question 1

- a) Describe the uses of the following scaffold fittings;
- (i) Double coupler
 - (ii) Swivel coupler
 - (iii) Base plate
 - (iv) Reveal pin
 - (v) Joint pin
- (10 marks)
- b) (i) Name **FOUR** power tools that are used by a plumber (4 marks)
- (ii) State the normal defects which are likely to be found on the following tools; File, Cold chisel and a hammer (6 marks)
- c) (i) Name **THREE** types of backsaws and handsaws used in woodwork (6 marks)
- (ii) Name **TWO** types of hardwoods and softwoods stating their uses (4 marks)

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

Question 2

- a) State **TWO** advantages and disadvantages of block work over brickwork (4 marks)
- b) What are the **FOUR** purposes of a bond in brickwork? (8 marks)
- c) Give the difference between plastering and rendering (4 marks)
- d) Name any **FOUR** requirements of a good mortar (4 marks)

Question 3

- a) Name **THREE** types of backsaws and handsaws used in woodwork (6 marks)
- b) Name **TWO** types of hardwoods and softwoods stating their uses (4 marks)
- c) Sketch and state the difference between a tongue and a tang (8 marks)
- d) Differentiate between a gauge and a gouge stating their uses (2 marks)

Question 4

- a) (i) Name **THREE** types of materials used in the manufacture of pipes
- (ii) Name **THREE** types of joints used in pipe work. (6 marks)

- b) State the uses of each of the following tools;
- (i) Hacksaw
 - (ii) Mallet
 - (iii) Auger
 - (iv) Reamer
- (4 marks)
- c) State **FOUR** safety precautions to be observed when using power tools
- (4 marks)
- d) Sketch the following pipe fittings
- (i) Hexagonal nipple
 - (ii) Return bend
 - (iii) Female and male elbow
- (6 marks)

Question 5

- a) With the aid of sketches, show **TWO** types of the following:
- (i) Widening joints
 - (ii) Framing joints
- (8 marks)
- b) Make a neat sketch of a clay brick and show the following:
- (i) Header face
 - (ii) Stretcher face
 - (iii) Arris
- (4 marks)
- c) State **FOUR** areas where sheet metal may be used in a building
- (8 marks)