



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

Faculty of Engineering & Technology

DEPARTMENT OF CIVIL AND BUILDING ENGINEERING

DIPLOMA IN ARCHITECTURE
DIPLOMA IN CIVIL ENGINEERING
DIPLOMA IN BUILDING
DIPLOMA IN BUILDING & CIVIL
CERTIFICATE TECHNICIAN I
CERTIFICATE IN ARCHITECTURE

(DA10/DC10/DB10/DBC10/CTI09/CA10)

EB 2127 : WORKSHOP TECHNOLOGY I

END OF SEMESTER EXAMINATIONS

APRIL/MAY 2010 SERIES

TIME: 3 HOURS

Instructions to Candidates

You should have the following for this examination:

- Answer booklet
- Scientific calculator

This paper consists of **FIVE** Questions.

Answer **THREE** Questions.

Question **ONE** is **COMPULSORY**

Maximum marks for each part of a question are as shown.

SECTION - MASONRY

Question ONE

- (a). State **SIX** areas where a mason may be employed. **(6 Marks)**
- (b). Sketch the front view of a block wall built in stretcher and show the load distribution. **(4 Marks)**
- (c). Outline the procedure of constructing a four course return block wall. **(10 Marks)**
- (d). Sketch the following:
- (i). Half bat
 - (ii). Bullnose brick
- (5 Marks)**
- (e). Differentiate the following:
- (i). Fine aggregate from All-in-aggregate.
 - (ii). Plain concrete from reinforced concrete.
- (5 Marks)**

Question TWO

- (a). Sketch a front view of a wall and indicate the following:
- (i). Course
 - (ii). Perpend (vertical) joint
 - (iii). Bed mortar
 - (iv). Racking back
 - (v). Dead end
- (10 Marks)**
- (b). Differentiate the following:
- (i). Concrete from mortar
 - (ii). Tothing from Racking back
 - (iii). Cement from Lime
 - (iv). Plain concrete from reinforced concrete
 - (v). Blocks from bricks
- (10 Marks)**

SECTION - PLUMBING

Question THREE

- (a). Sketch the following pipe fitting;
- (i). Reducing socket
 - (ii). Return bend
 - (iii). Socket
 - (iv). Equal Tee
 - (v). Plain nipple
- (10 Marks)**
- (b). State the use of the following tools:
- (i). Reamer
 - (ii). Die-stock
 - (iii). Pipe wrench
 - (iv). Auger
 - (v). Soldering bit
 - (vi). File
- (6 Marks)**
- (c). Sketch and label the parts of a water stand pipe. **(4 Marks)**

Question FOUR

- (a). Outline the procedure of bending a steel pipe in a workshop. **(10 Marks)**
- (b). Sketch the following:
- (i). 'P' – Trap
 - (ii). Running Trap
 - (iii). 'S' – Trap
 - (iv). Plug
 - (v). Roding rod
- (10 Marks)**

SECTION - CARPENTRY

Question FIVE

- (a). Sketch the following timber joints;
- (i). Half Lap
 - (ii). Mortise and Tenon
 - (iii). Scarf
 - (iv). Bird's month
 - (v). Finger
- (10 Marks)**

(b). State the use of the following tools;

- (i). Tenon saw
- (ii). Cross-cut saw
- (iii). Chisel
- (iv). Jack plane
- (v). Saw-set

(10 Marks)