



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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR:  
**BACHELOR OF SCIENCE IN CIVIL ENGINEERING**  
(BSCE 13S (A) – Y1 S2 BSCE 13S (B) – Y1 S2)

EME 2106: WORKSHOP PRACTICE

**END OF SEMESTER EXAMINATION**

SERIES: APRIL 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 question **ONE (COMPULSORY)** and any other **TWO** questions

All questions carry equal marks

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

---

**Question One**

a) State the use of the following tools:

- (i) Plumb bob
- (ii) Trammel
- (iii) Hacksaw
- (iv) Mallet
- (v) Reamer

**(5 marks)**

b) Explain the procedure of threading a galvanized steel pipe using a die-stock.

**(6 marks)**

c) With the aid of a sketch, explain the procedure of setting out a rectangular building using a builders square.

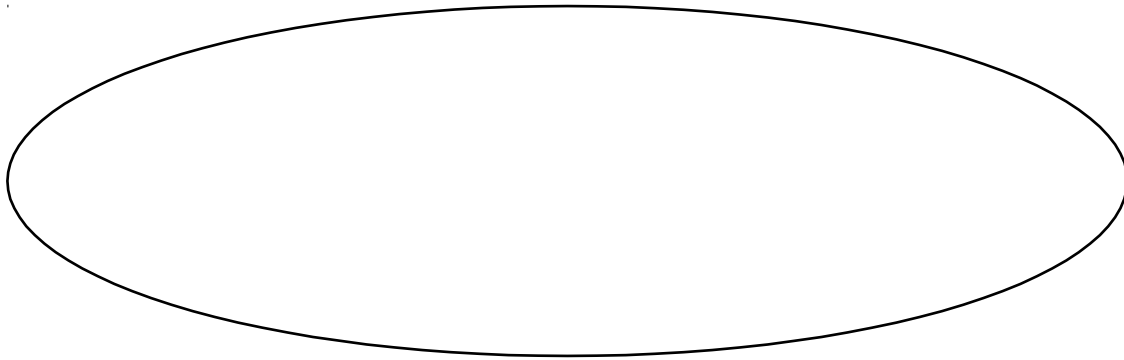
**(8 marks)**

d) Outline the uses of copper pipe in building services. (6 marks)

e) State FIVE safety care to be observed in a woodwork workshop (5 marks)

### Question Two

- a) (i) Outline TWO purposes for marking out.  
(ii) Using sketches, explain the FOUR types of datums.  
(iii) The component shown in figure 1 is to be marked out plate. Explain the procedure for marking out.



**Figure 1**

(16 marks)

- b) (i) State TWO uses of centre punch  
(ii) Trammel

(4 marks)

### Question Three

- a) (i) Sketch and label the parts of a wash down water closet (w.c)

(ii) State FOUR principles of good drainage system

(8 marks)

- b) Sketch the following pipe fittings:

(i) Straight socket

(ii) Plain nipple

(iii) Cross

(iv) Equal 'T'

(v) Cap

(5 marks)

- c) Explain the procedure of bending a 25mm plastic pipe using a template.

(7 marks)

### Question Four

- a) (i) State FIVE methods by which metal parts may be jointed:

(ii) Explain in the construction of blind insets (pop) and the riveting procedure.

(9 marks)

- b) (i) State FOUR disadvantages of the direct cold water supply.

(4 marks)

(ii) Explain the solar heated hot water thermosiphon system.

(4 marks)

c) State THREE defects of timber

**(3 marks)**

### **Question Five**

a) Define the following as used in masonry:

- (i) Reinforced concrete
- (ii) Mortar
- (iii) Bonding
- (iv) Curing

**(4 marks)**

b) Explain the procedure of making fixed tongue and grooved joint in woodwork.

**(8 marks)**

c) With the aid of a sketch, explain the procedure of dropping the width of a wall to a trench.

**(8 marks)**