



# TECHNICAL UNIVERSITY OF MOMBASA

*Faculty of ENGINEERING & TECHNOLOGY*

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

UNIVERSITY EXAMINATIONS FOR DEGREE IN  
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

## **ECE 2216 : ENGINEERING DRAWING IV**

END OF SEMESTER EXAMINATIONS

**SERIES:** DECEMBER 2013

**TIME:** 2 HOURS

### **INSTRUCTIONS:**

- You should have the following for this examination Drawing instruments, scientific calculator, Drawing papers.
- This paper consists of Five questions; Answer question ONE(compulsory)from section And any other THREE from section B.

***This paper consists of Two printed pages***

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### **QUESTION 1 (Compulsory)**

- a) Using a cross section of a wall, illustrate the meaning of the following terms as used in the construction industry: (10marks)
- i) Fandation
  - ii) Hard core
  - iii) Plith
  - iv) Window sill
  - v) Wall plate

b) Using a table format ,sketch the conventional symbols of the following building materials (10marks)

- i) Brick
- ii) Mass concrete
- iii) Timber
- iv) Ground level
- v) Glass

c) Figure 1 is a plan of a staircase. Draw section A-B of the staircase. Roof is flat. (10marks)

## SECTION B

### QUESTION 2

There are different types of staircases. Name and illustrate five types. (15marks)

### QUESTION 3

Figure 2 is a plan of a septic tank. Draw section X-X at a scale of 1:50. (15marks)

### QUESTION 4

Figure 3 shows specification and a line sketch of a small office building . Draw to a scale of 1:50 either of the two: (15marks)

- i) Ground floor plan
- ii) Front elevation
- iii) Section EH

The roof is flat with a parapet walling of 350mm.

### QUESTION 5

A double paralalled shutter door has the following specifications: (15marks)

- Opening in the wall - 1200mmx200mm
  - Panel - 100mmx 75mm
  - Top and freeze rails - 100mmx45mm
  - Lock rail - 200mmx45m
  - Thickness of panel - 30mm tampered at 20mm
- Three panels in each shutter

To a scale of 1:100 draw either of the two:

- i) Elevation
- ii) Sectional plan
- iii) Sectional elevation