TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR DECREE IN:

BACHELOR OF SCIENCE IN CIVIL ENGINEERING (BSCE)

ECE 2216: ENGINEERING DRAWING IV

END OF SEMESTER EXAMINATION
SERIES: APRIL 2015
TIME ALLOWED: 2 HOURS

<u>**Instructions to Candidates:**</u>
You should have the following for this examination
- *Answer Booklet*
- *Pocket Calculator*
- *Drawing Sheet*

This paper consists of **FIVE** questions. Answer question **ONE (COMPULSORY)** and any other **TWO** questions
Maximum marks for each part of a question are as shown
Use neat, large and well labeled diagrams where required
This paper consists of **TWO** printed pages

Question One (Compulsory)

a) Using a table format, sketch the conventional symbols of the following building materials.
   (i) Brick
   (ii) Mass concrete
   (iii) Sawn timber
   (iv) Glass
   (v) Wall plate   **(10 marks)**

b) Using a cross section of a wall, illustrate the following elements of a building   **(10 marks)**
   (i) Foundation (strip)
   (ii) Hardcore
   (iii) Plinth
   (iv) Window cell

(v) Wall plate

c) There are several types of stair cases. Name and illustrate FIVE types **(10 marks)**

Question Two

Figure 1 is the plan of a staircase. Using appropriate scale, draw section A-B of the stair case

(20 marks)

Question Three

Figure 2 shows the specification and a line sketch of a small office building. Draw at a scale of 1:50 either of the two:

   (i) Ground floor plan   **(10 marks)**
   (ii) Front elevation   **(10 marks)**
   (iii)   Section EH   **(10 marks)**

   The roof is pitched at a slop of 22.5º

Question Four

Figure 3 is a plan of a septic tank. Draw section X-X at a scale of 1:50   **(20 marks)**

Question Five

a) (i) Figure the chamber command as used in AutoCAD   **(2 marks)**

   (ii) Explain how to use a chamber command to join a distance of 500 units   **(6 marks)**

b) Define the extent command in AutoCAD   **(2 marks)**

c) (i) Define the term command and how to call the command in AutoCAD   **(6 marks)**

   (ii) Briefly describe how to call the term command in AutoCAD and seven steps of applying the command.   **(4 marks)**