TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

DIPLOMA IN BUILDING & CIVIL ENGINEERING (DBCE 11)
DIPLOMA IN CIVIL ENGINEERING (DCE 11)

EBC 2219: CIVIL ENGINEERING DRAWING & CAD

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: OCTOBER 2013
TIME ALLOWED: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Scientific Calculator*

This paper consists of **FIVE** questions.
Answer any **THREE** questions

Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

Question One

a) (i) State **THREE** advantages of using computer aided design in creating engineering drawings. **(3 marks)**

(ii) State THREE methods of accessing commands in a CAD window **(3 marks)**

b) Briefly explain the use of co-ordinates systems in CAD **(8 marks)**

c) Explain THREE methods of specifying distances in a CAD program **(6 marks)**

Question Two

The following data relates to foundation details to a proposed bungalow in a firm soil:

(i) 250mm deep x 600mm wide mass concrete strip foundation
(ii) 200mm thick stone walling
(iii) 300mm deep broken stone hard core filling
(iv) 50mm thick quarry dust blinding
(v) 100mm thick mass concrete ground floor slab

Include any other necessary detail not provided. Draw the foundation with the above details. **(20 marks)**

Question Three

A car port/garage is needed to accommodate one saloon car. Design the car-port with a r.c. flat roof and draw a longitudinal section of the car port. **(20 marks)**

Question Four

A timber pitched roof is needed to cover a class room whose clear span is 8.0m. Draw and detail a suitable truss for the roof. **(20 marks)**

Question Five

Draw and detail a typical longitudinal section through a medium size septic tank. **(20 marks)**