(*University of Choice*)

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

MAIN CAMPUS

UNIVERSITY EXAMINATIONS 2014/2015 ACADEMIC YEAR

FIRST YEAR SECOND SEMESTER EXAMINATIONS

FOR THE DEGREE OF BACHELOR OF SCIENCE IN CIVIL AND STRUCTURAL ENGINEERING

COURSE CODE: CSE 112

COURSE TITLE: ENGINEERING DRAWING II

DATE: FRIDAY, 17TH APRIL 2015 **TIME:** 9.00AM – 12.00 NOON

INSTRUCTIONS:

1. This question paper contains FOUR questions.
2. Answer ALL questions.
3. Answer each question on a separate A3-size paper.
4. Use the answer booklet for rough work and any necessary computations.

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 5 Printed Pages. Please Turn Over.

Question 1 (25 marks)
Figure Q1 shows the orthographic projections of a solid object. Draw on the same paper:
(a) the isometric view of the object to a scale of 1:10 ($12^1/_2$ marks) and
(b) the oblique view of the object to scale 1:10 ($12^1/_2$ marks).

Question 2 (25 marks)
Figure Q2 shows the strip foundation layout for a small generator house. Draw the floor plan to scale 1:50 and section X-X of the strip foundation details to a scale of 1;5. Door A to the generator equipment is double-door double-swing while door B to the fuel storage room is single-door single-swing. Make any other reasonable assumptions and label all features.

Question 3 (25 marks)
Figure Q3 shows details of a 4 m access road to a residential house in an up-market estate. The access road surface is pre-mix 25 mm thick on 300 mm road base and 150 mm murram sub-base. The road is provided with a stone kerb laid on 325 x 150 concrete bedding with a 200 mm concrete backing.
(a) Sketch the layout of the access road (5 marks)
(b) Draw section X-X to scale 1:25 (10 marks)
(c) Draw the details of the stone kerb to a scale of 1:5 (10 marks)

Question 4 (25 marks)
Figure Q4 shows a section of stair case to the first landing between the ground floor and first floor levels for a 2-storey building.
(a) Re-draw the section of the stair case indicating the main bars and distribution bars. (10 marks)
(b) Show the bar bending schedule for bar marks 01, 02 and 03 (indicating member, bar mark, type and size, number of members, number in each, total number and sketch of bar shape). (15 marks)