KIBABII UNIVERSITY

2021/2022 ACADEMIC YEAR

FIRST YEAR FIRST SEMESTER

SUPPLEMENTARY EXAMINATIONS

FOR THE DEGREE OF BACHELOR OF SCIENCE IN RENEWABLE ENERGY AND BIOFUELS TECHNOLOGY

COURSE CODE: REN 112

COURSE TITLE: ENGINEERING DRAWING 1

DATE: 21/7/2022 **TIME: 8:00AM-10:00AM**

INSTRUCTIONS TO CANDIDATES

This paper consists of TWO sections: A and B

Section A is Compulsory. Attempt any TWO questions from section B

This paper consists of 4 printed pages. Please Turn over

SECTION A: COMPULSORY

QUESTON ONE (30 MARKS)

NOTE: INDICATE THE CONSTRUCTION LINES

(a) Sketch and state the APPLICATION of the following types of lines applied in Engineering drawing based on BS 308:

(i) continous thick

(ii) short dashes

(iii) Chain thin   (6 marks)

(b)   Draw a VERTICAL ellipse given the following:

Major Axis = 130mm; Minor Axis =80mm   (6 marks)

(c)   Draw an internal tangent to TWO circles of 50mm equal diameter with center distance of 100mm

(6 marks)

(d) Construct a regular hexagon using a T-square and a 60 degree set square, given the distance across the corners as 100mm

(6 marks)

(e) Write the full name of the following abbreviations:

(i) A/F ;   CSK;   SCR;

(ii) State THREE types of information contained in a standard Title block

(6 marks)

SECTION B: ATTEMP ANY ONE QUESTION FROM THIS SECTION (40 MARKS)

QUESTION TWO (40 MARKS)

Draw the following views of Figure 1 in first Angle projection

    (i) Front view in the direction of Arrow A

    (ii) Side view in the direction of Arrow B

    (iii) Plan in the direction of arrow C
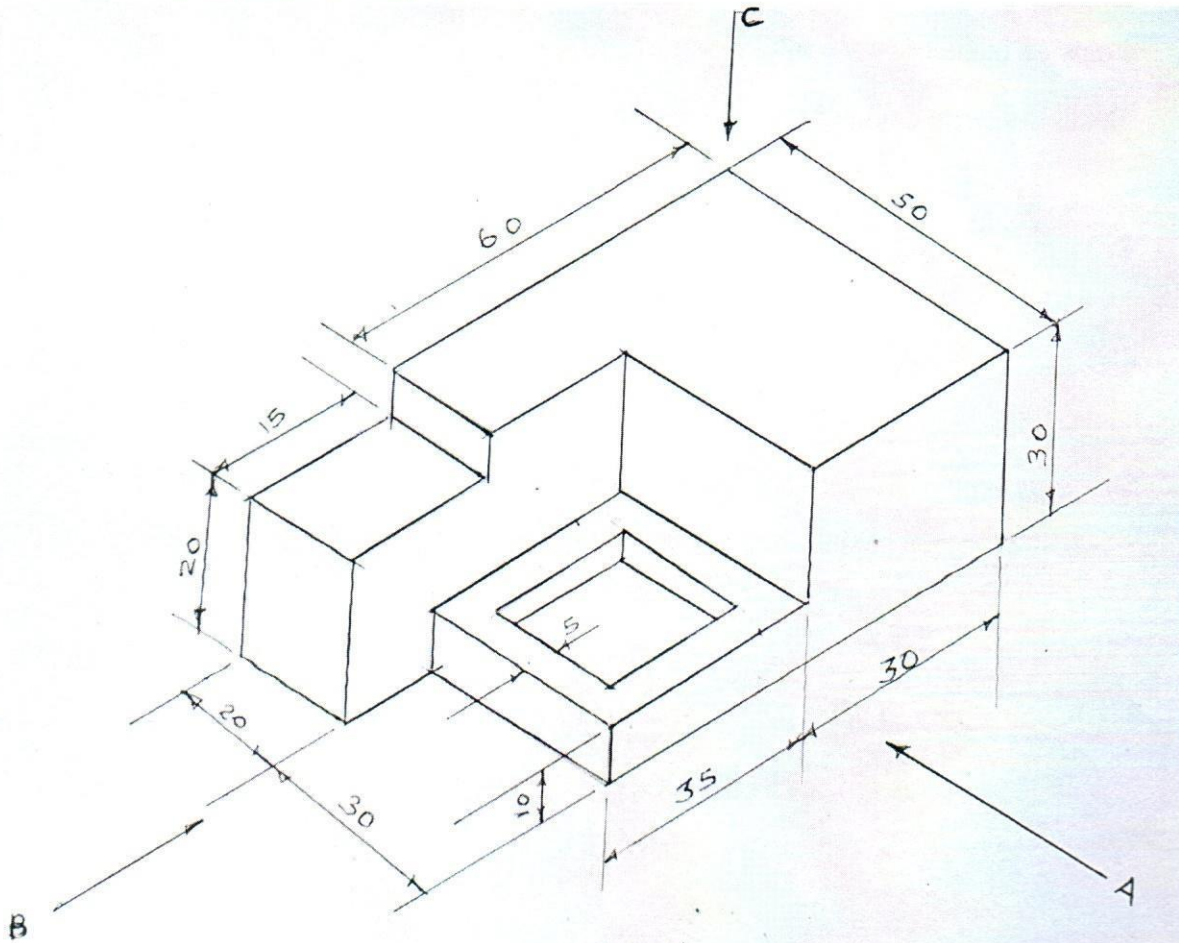

FIG. 1

QUESTION THREE (40 MARKS)

    (i) Define a parabola

    (ii) Plot a parabola given that the focus and Directrix are 20mm apart

QUESTION FOUR (40 MARKS)

(i)   Draw an Isometric cube of 60mm

(ii)   Draw isometric circles on the three visible faces of the cube in Q.4 (i)

                                                  (40 marks)