TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL & AUTOMOTIVE ENGINEERING

UNIVERSITY EXAMINATION FOR:

BTAP, BTAC, BTRE, BSFQ &BTMB

EME 4140 : TECHNICAL DRAWING

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 3 HOURS

DATE: 20 May 2016

<u>**Instructions to Candidates**</u>
You should have the following for this examination
    -*Answer Booklet, examination pass and student ID, Drawing paper A2*
This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.
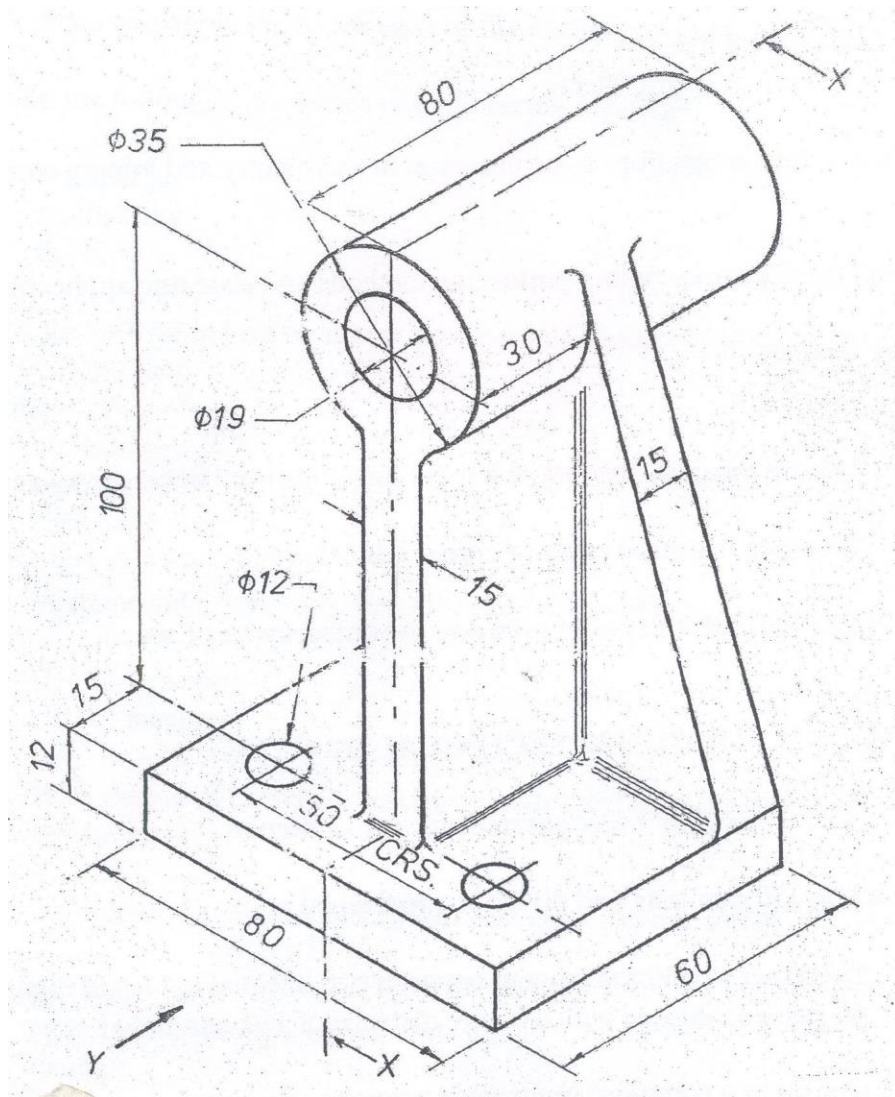**Do not write on the question paper.**

Question ONE

A machine component is shown in figure QN1. Draw to a FULL scale in third angle orthographic projection the following views;

(a) Sectional front elevation along XX

(b) End elevation from Y

(c) Plan

Include SIX major dimensions and the symbol of projection.

(30 marks)

QN1.

Question TWO

Two views of a truncated hexagonal base pyramid are shown in Figure QN2. Copy the given views and draw;

(a) A Complete plan

(b) End elevation from EE

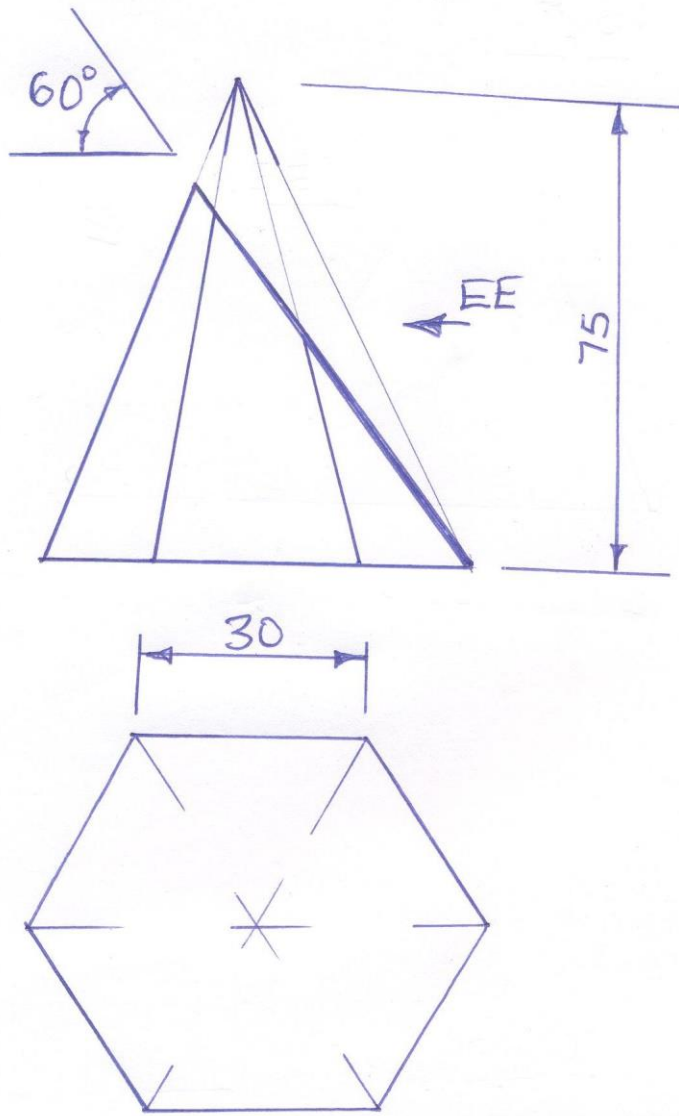(c) True shape of the cut surface

(d) Surface development

(20 marks)

Figure QN 2.

Question THREE

(a) Construct a diagonal scale where 50mm represent 1mm. The scale is to cover a range of 3mm. and to read to

an accuracy of 0.01mm. Show a reading of 2.72mm.

(10 marks)

(b) An Ellipse has major and minor axes 120mm and 80mm respectively. Construct the ellipse using the

concentric circles method.

(10 marks)

Question FOUR

Three views of a machine bracket drawn in Third angle projection are shown in figure QN5. Draw the bracket in OBLIQUE projection taking oblique rules into consideration.
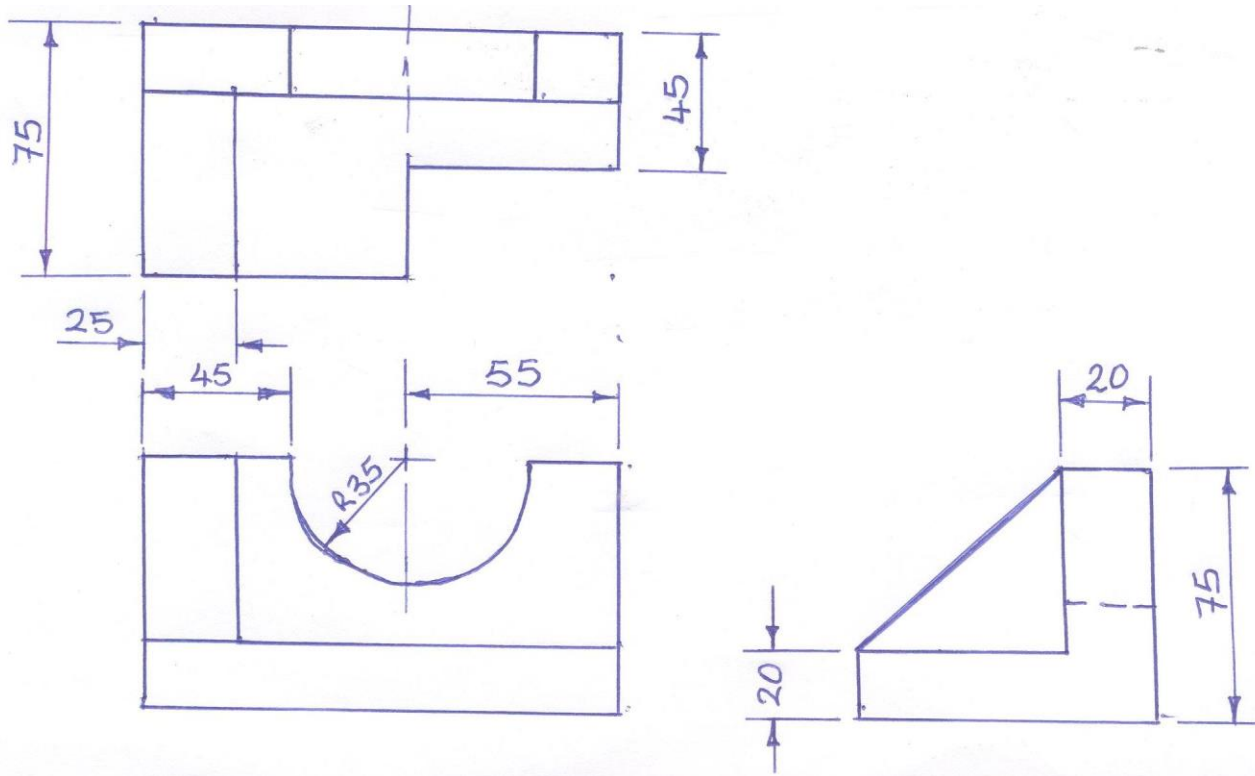
(20 marks)

Figure QN4

Question FIVE

The outline of a CRANE-HOOK is shown in figure QN5. Carefully, draw the outline marking the centre for each radius and show clearly the method by which the centre was obtained.
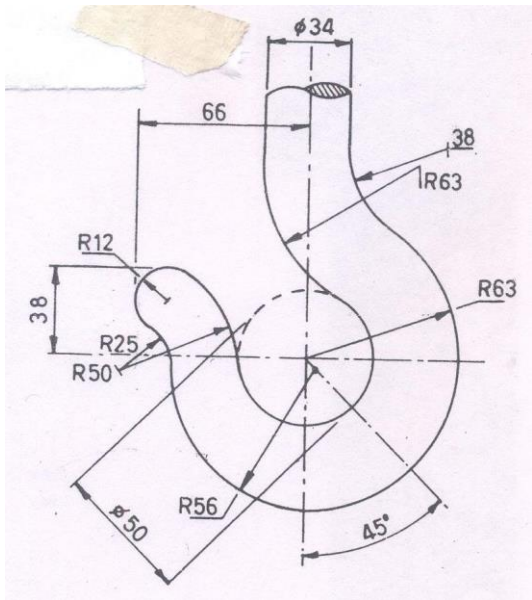
(20 marks)

Figure QN5.