



# TECHNICAL UNIVERSITY OF MOMBASA

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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

## Instructions to Candidates

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.**

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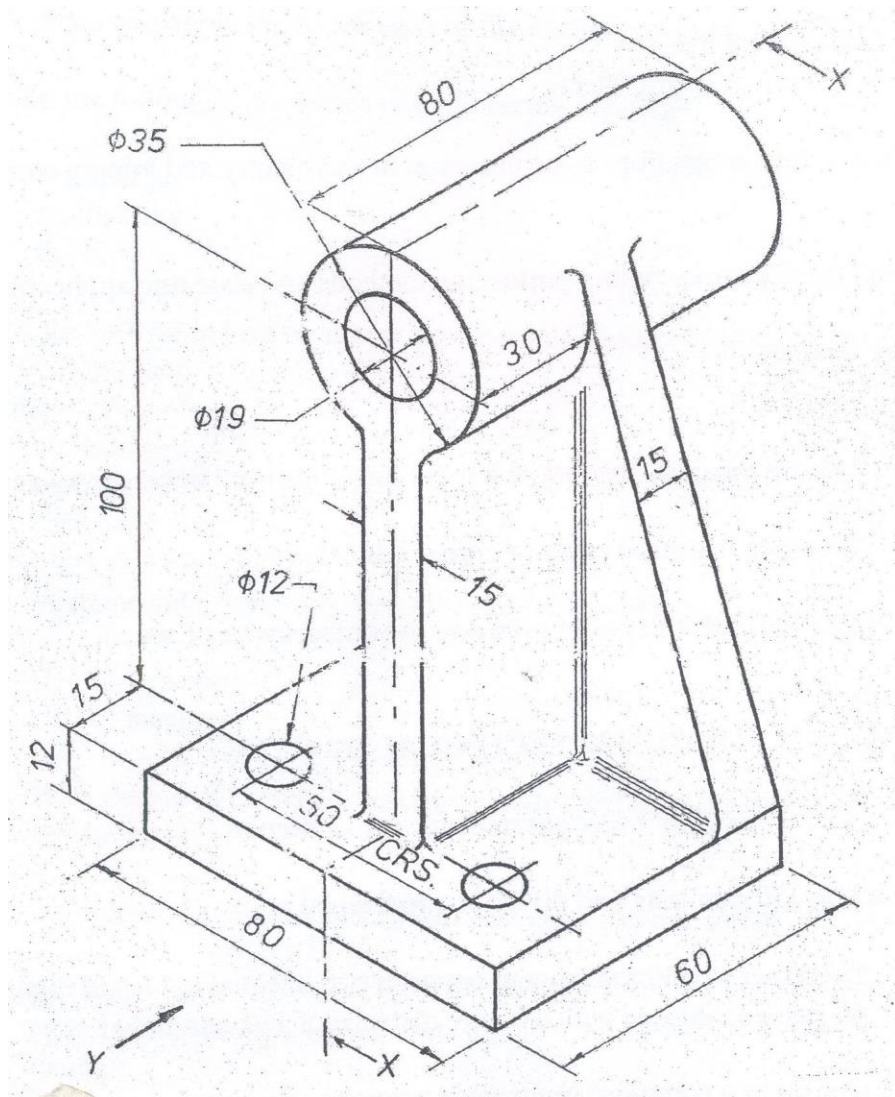
## **Question ONE**

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 Complete plan
- End elevation from EE
- True shape of the cut surface
- Surface development

(20 marks)

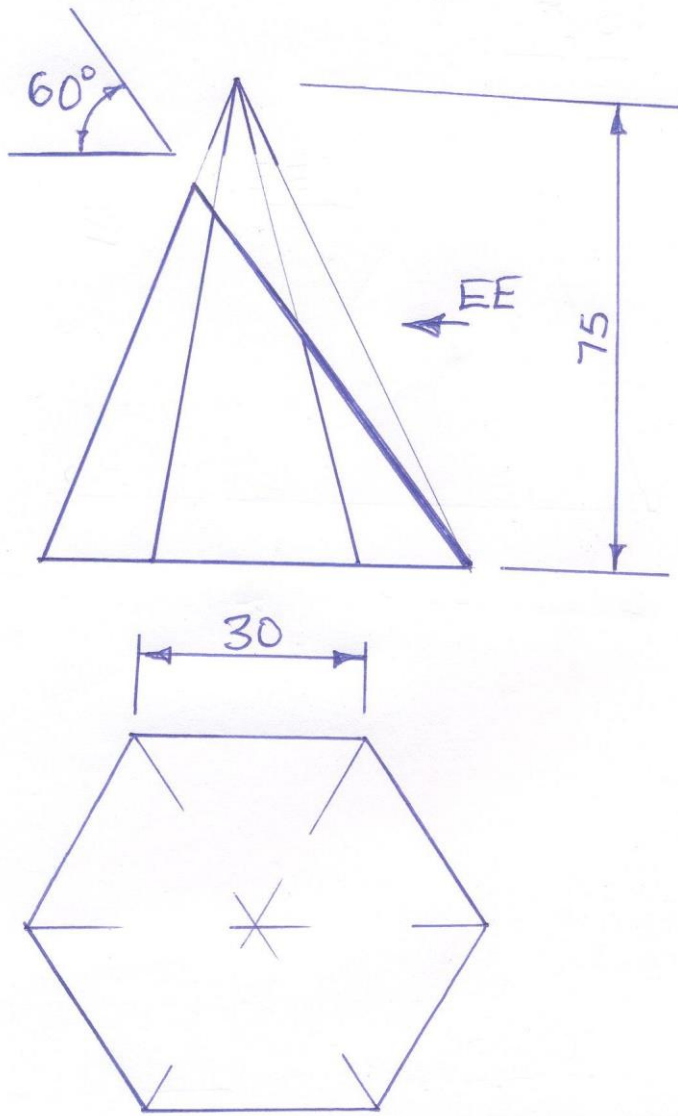


Figure QN 2.

### 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)

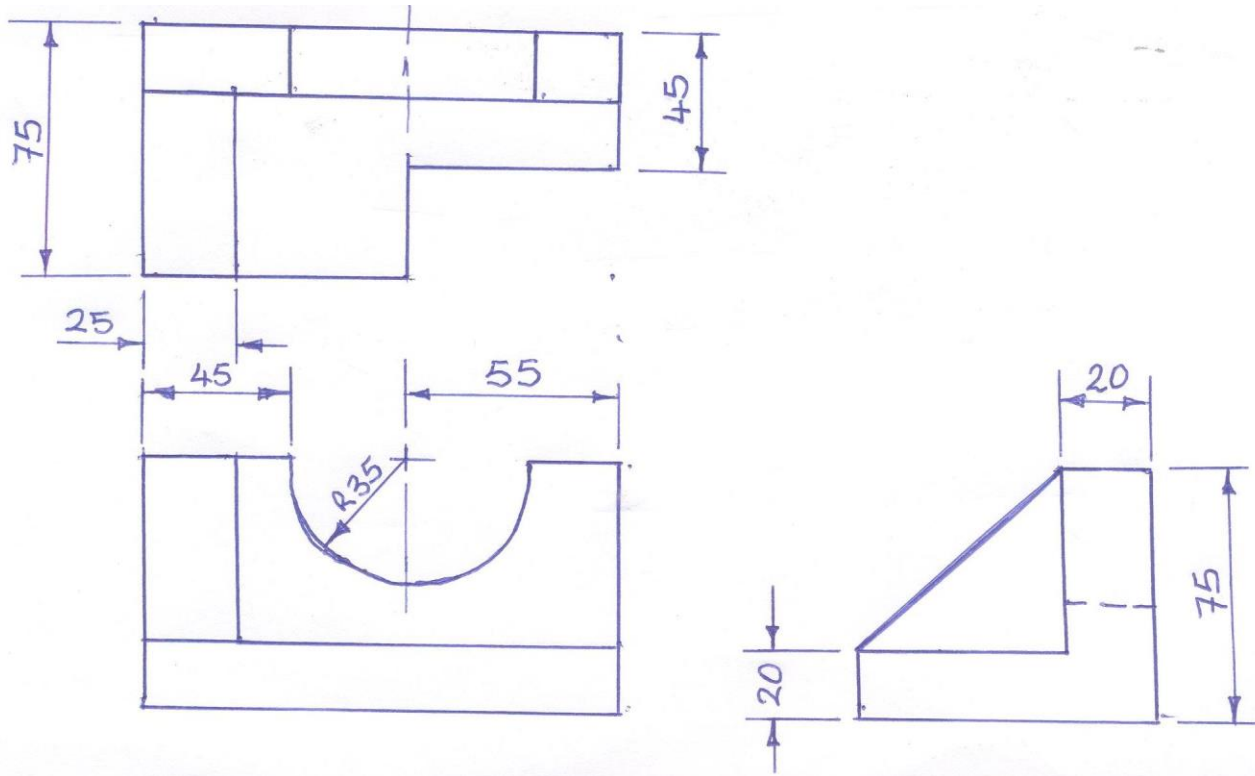


Figure QN4

### 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)

