



# MACHAKOS UNIVERSITY

University Examinations 2016/2017

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

FIRST YEAR SECOND SEMESTER EXAMINATION FOR CERTIFICATE IN  
MECHANICAL ENGINEERING

MEC-PR 112: TECHNICAL DRAWING II

DATE: 2/6/2017

TIME: 8:30 – 10:30 AM

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## INSTRUCTIONS

*Answer Question One and Any Other Two Questions*

*You require drawing instruments for this examination.*

1. Fig. 1 shows a bracket drawn in isometric projection. Draw full size in 1<sup>st</sup> angle projection the following views;
  - a) A sectional end elevation viewed along the line X-X
  - b) A front elevation as seen from direction A
  - c) A plan viewInclude SIX major dimensions (30 marks)
2. The plan and an incomplete elevation of two intersecting pipes are as shown in Fig 2. Copy the given views and;
  - a) Complete the plan
  - b) Complete the line of intersection
  - c) Construct the surface development of the pipe marked E (20 marks)
3. Fig. 3 shows an end elevation of a right hexagonal pyramid of base sides 35mm and a vertical height of 80mm cut through the cutting plane X-X ;

- a) Copy the given views
  - b) Complete the plan
  - c) Draw the true shape of the cut portion (20 marks)
4. Fig 4. Shows views of a machined block drawn in 1<sup>st</sup> angle projection. Construct an isometric view of the block taking point A as the lowest point (20 marks)
5. Draw a pentagon given;
- i. One side 50mm
  - ii. Circumscribing circle 90mm (20 marks)