

MACHAKOS UNIVERSITY
SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING
FIRST YEAR SECOND SEMESTER EXAMINATION FOR
ARTISAN CERTIFICATE IN:
-WELDING,
_MOTOR VEHICLE,
_PLUMBING,
_TEXTILE TECHNOLOGY,
_FOOD AND BEVEARAGES,
_FASHION DESIGN.

APPLIED GEOMETRY

TIME: 3 HOURS

INSTRUCTIONS.

This paper consists of FIVE Questions.

Answer Question ONE (Compulsory) and any other THREE questions.

You need Drawing instruments.

1. FIGURE 1 shows Two views in orthographic projection of six objects derived from a cube of 60 mm sides.

Copy the given views then complete the THIRD views.

Sketch each object in a pictorial projection in the spaces indicated. (40 marks)

2. Draw a pentagon given:

(a) Length of one side, 50 mm. (7 marks)

(b) Circumscribing circle, 90 mm. (13 marks)

3. FIGURE 2 Shows a machined block drawn isometric projection. Draw orthographic views in FIRST angle projection with Front elevation viewed from direction F. (20 marking)
4. Draw an isometric projection of the block represented by the views in Fig. 3, taking X as the lowest point. (20 marks)
5. Draw the surface development of:
 - (a) A cylinder, diameter 60 mm and height 90 mm. (10 marks)
 - (b) A cone, base circle 60 mm and 75 mm as its height. (10 marks)