MACHAKOS UNIVERSITY

University Examination 2018/2019

SCHOOL OF ENGINEERIING AND TECHNOLOGY DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

FIRST YEAR SEMESTER THREE EXAMINATION FOR CRAFT CERTIFICATE IN PLUMBING

1305/312 TECHNICAL DRAWING

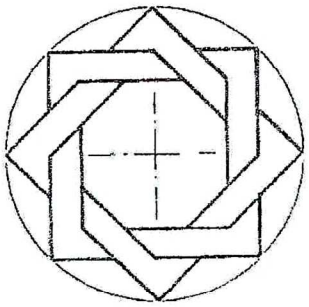
DATE: **TIME:**

Instructions:

I ATTEMPT THE FOLLOWING **FIVE** QUESTIONS

II. ALL DIMENSIONS ARE IN **MILLIMETERS**

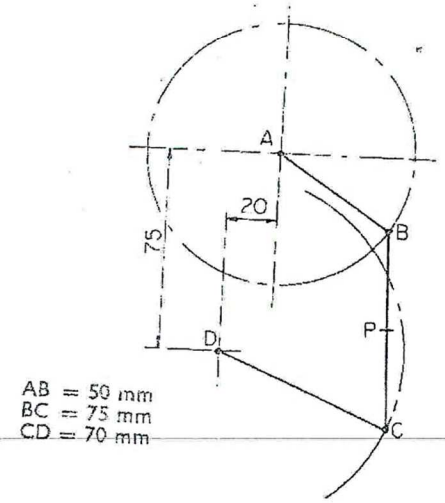
1 (a) The pattern below is made of interlacing squares.
Draw the figure making the circumscribed circle 70mm (8marks)



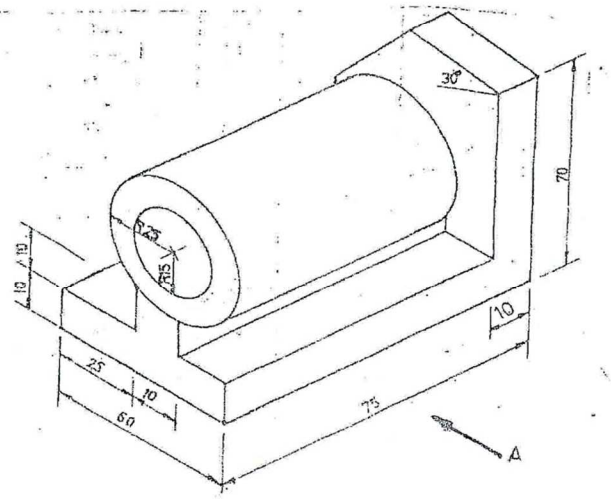
(b) Construct an octagon within a square of sides 70mm. *(6marks)*

(c) Construct a regular hexagon having a distance 55mm across the flats *(6marks)*

2 The mechanism below consists of a crank **AB** which rotates about centre **A,** an arm **CD** which is pin jointed at **D** and a link **BC** which connects the crank and the arm. Plot the locus traced by the mid point **P** of link **BC** for one complete revolution of crank **AB** (20 marks)

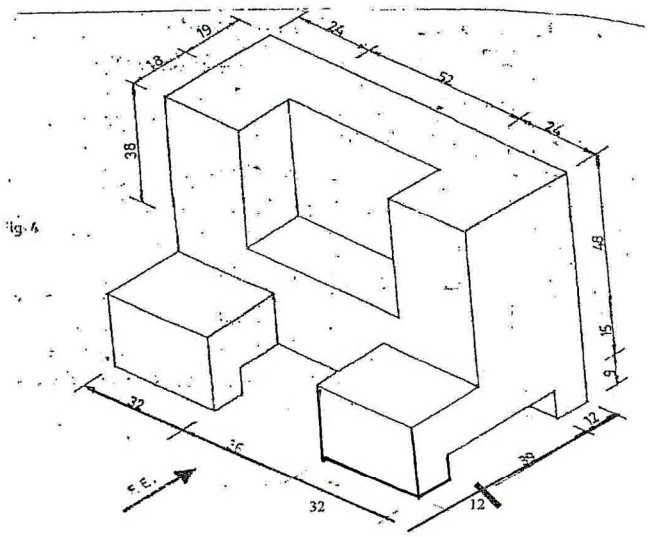


3. A pictorial view pf a mounting block is shown below. Draw the following views in 1st angle projection: (i) Front elevation from the direction of arrow A
(ii) Left end elevation
(iii) Plan (20 marks)



4. Figure 4 shows an isometric drawing of a machine block. Draw full size in third angle projection the following views showing all hidden details and any six important dimensions

   i. Front elevation from the direction shown
   ii. End elevation
   iii. plan



5. Figure 6 shows two first of an object in the first angle projection. Draw a two point perspective view of the object using the following information
   Distance PPL to HL = 50
   Distance HL to GL = 60
   Plan inclined at 30^0, 60^0 to the horizontal.
   Assume any other details not given *(20 marks)*