

2506/104
2507/104
ENGINEERING DRAWING
June/July 2018
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL
DIPLOMA IN AERONAUTICAL ENGINEERING
(AIRFRAMES AND ENGINES OPTION)
(AVIONICS OPTION)

MODULE I

ENGINEERING DRAWING

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Drawing paper size A2;

Drawing instruments;

A non-programmable scientific calculator;

Drawing table/Board.

This paper consists of FIVE questions in TWO sections; A and B.

Answer Question 1 in section A (compulsory) and THREE questions from section B in the drawing papers provided.

Maximum marks for each part of a question are as indicated.

All dimensions are in millimeters.

Candidates should answer the questions in English.

This paper consists of 6 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A (40 marks)

This section is Compulsory.

1. Figure 1 shows the parts of a Vee block clamp. Assemble the parts and draw full size in 3rd angle projection the following views:

- (a) sectional front elevation on the cutting plane $x - x$;
- (b) plan elevation (Do not show the hidden details).

Include a parts list and indicate **four** major dimensions.

(40 marks)

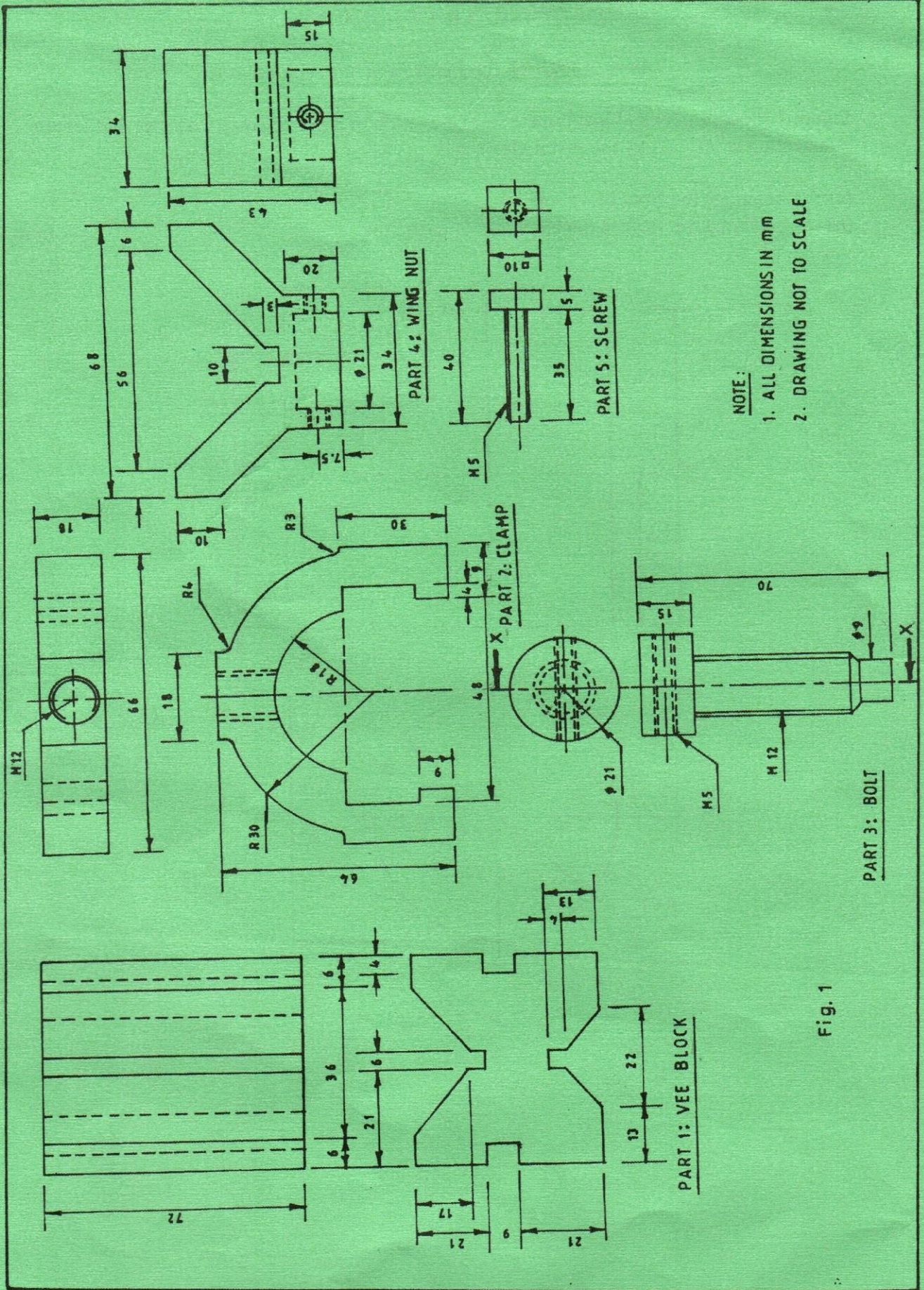


Fig. 1

SECTION B (60 marks)

Answer **THREE** questions from this section.

2. Figure 2 shows a plan and incomplete front elevation of pipes of equal diameter and length intersecting at 90° . Copy the given views and:

- (a) complete the front elevation;
- (b) construct the surface development of each pipe. (20 marks)

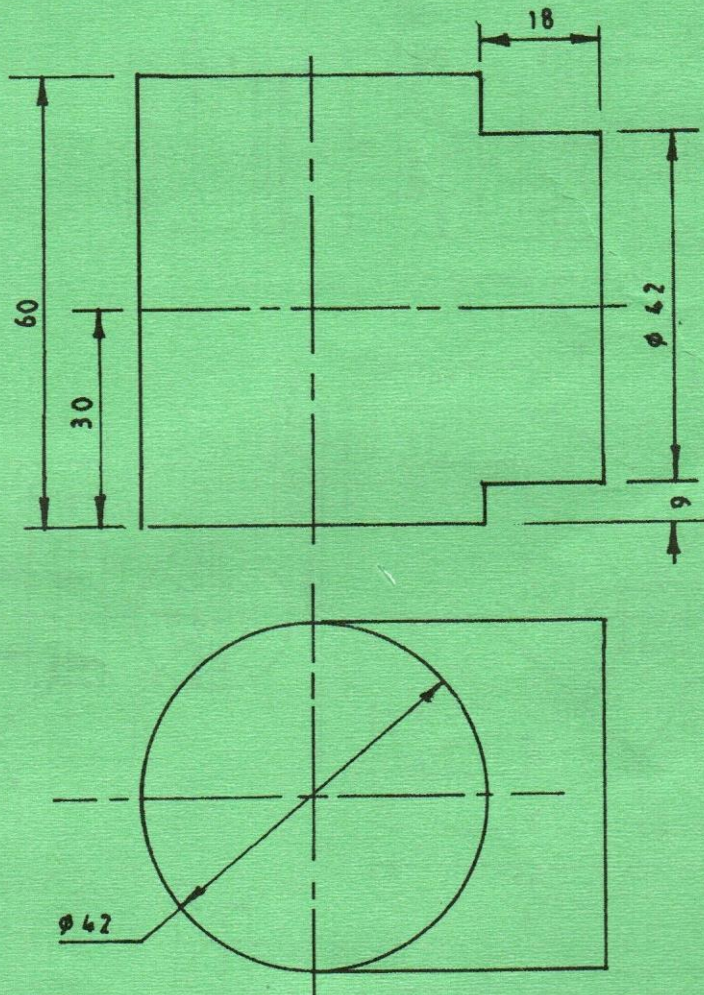


Fig. 2

3. Figure 3 shows a five - pointed star generated from a regular pentagon whose circumscribing circle radius is 30 mm. Construct the star. (20 marks)

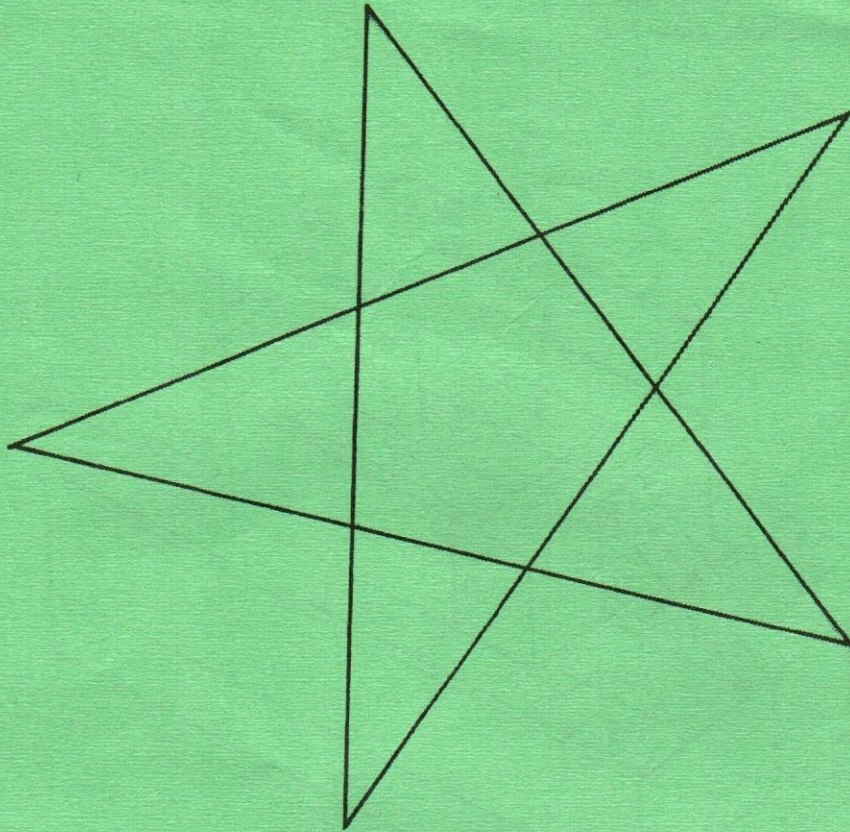


Fig. 3

4. Draw each of the following loci:
- (a) involute of a square of side 20 mm; (8 marks)
 - (b) involute of a circle of diameter 24 mm. (12 marks)

