

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 3<sup>rd</sup> 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)

F  
P  
E F E

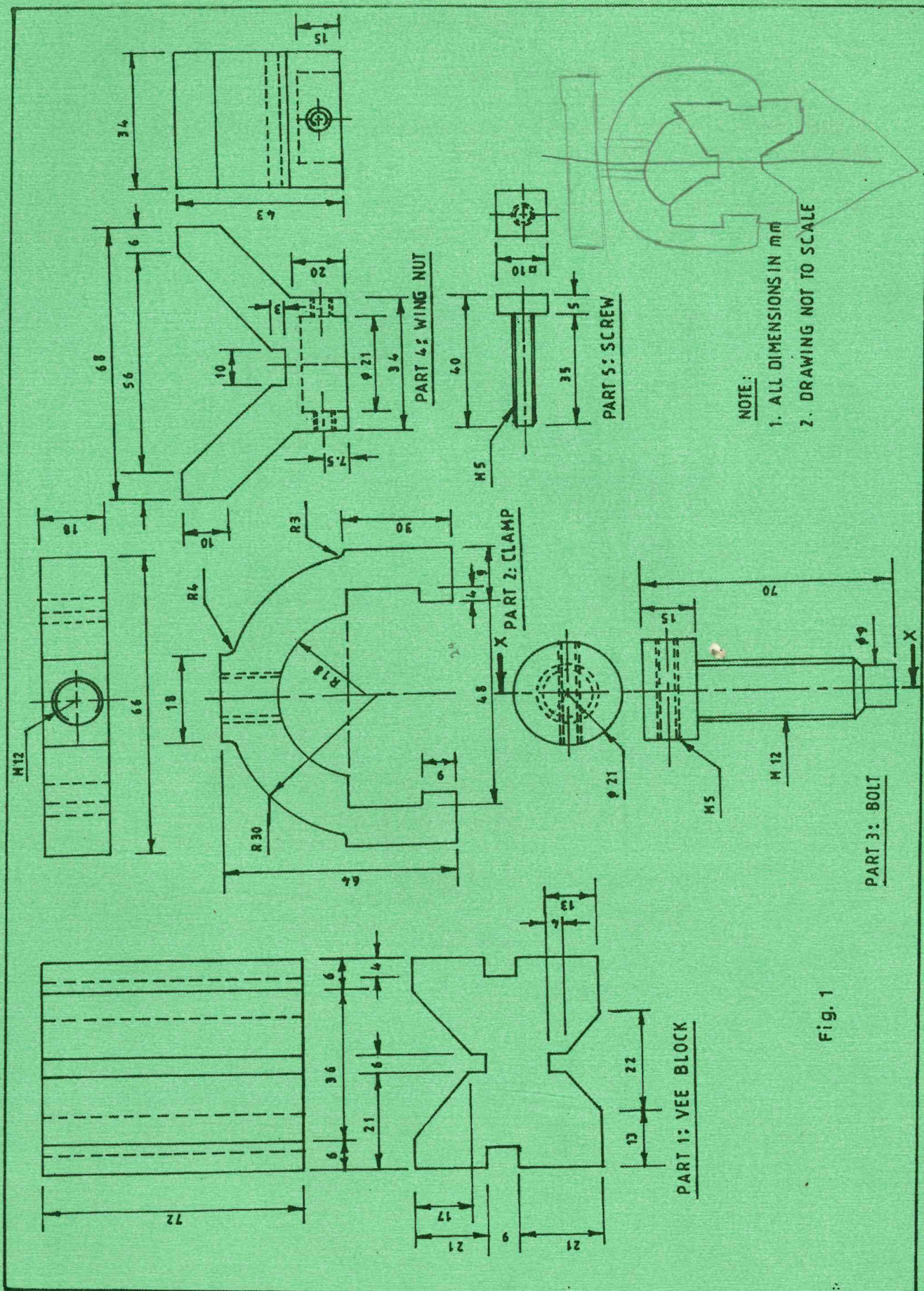


Fig. 1

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)

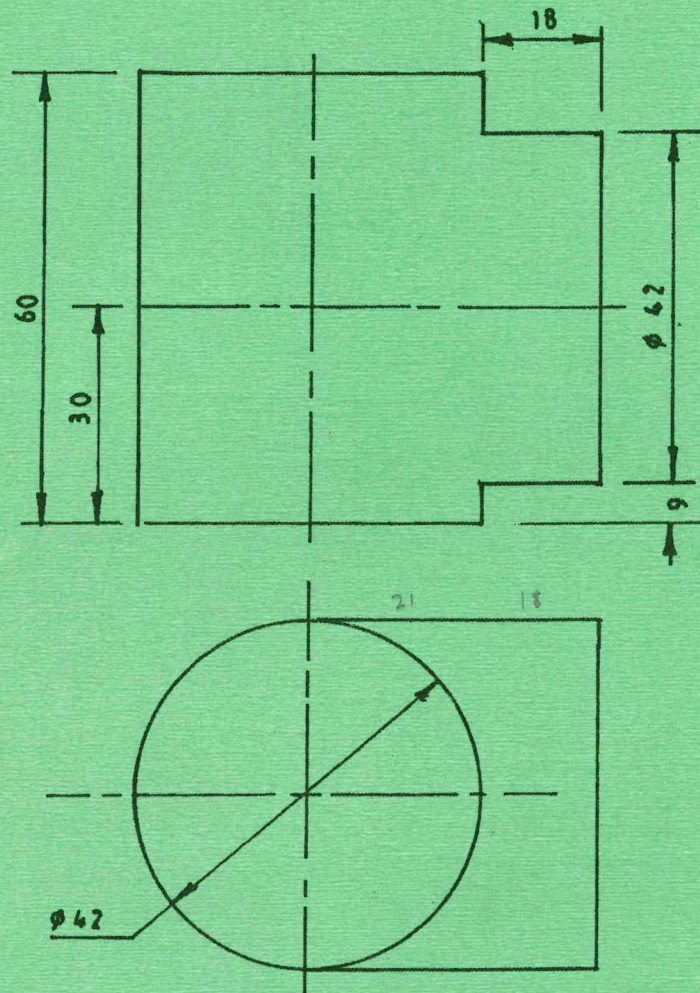


Fig. 2

22 x 42  
7

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)

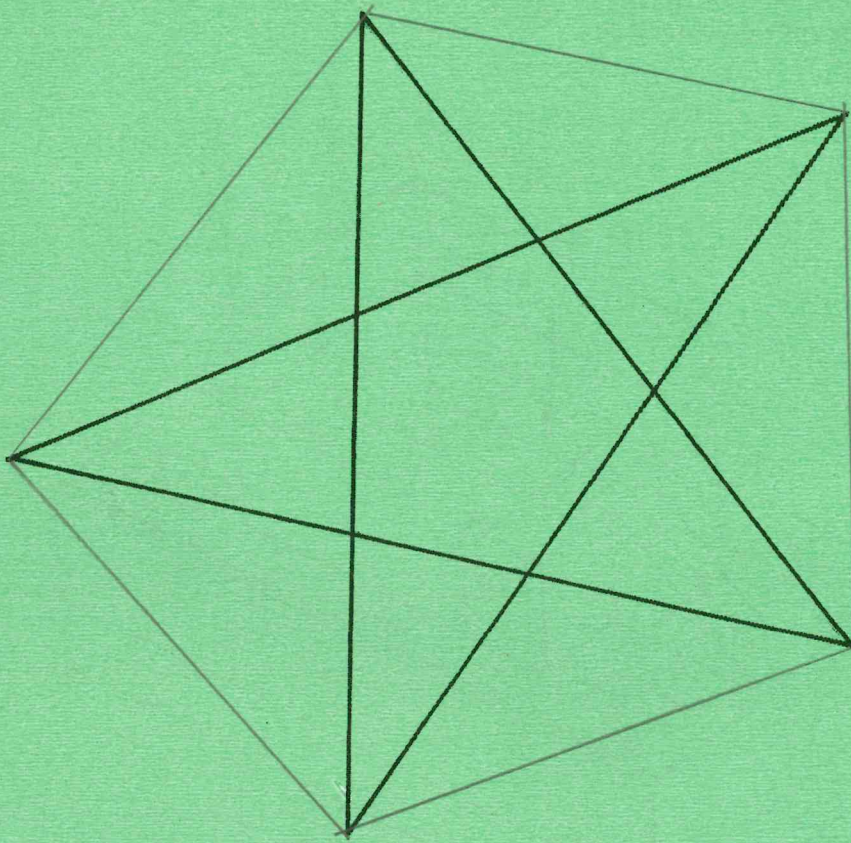


Fig. 3

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)

5. Figure 4 shows a cast iron block. Draw the following views to a full size scale in first angle projection:

- (a) sectional front view (F.E);
- (b) half sectional side view E.E;
- (c) top view.

(20 marks)

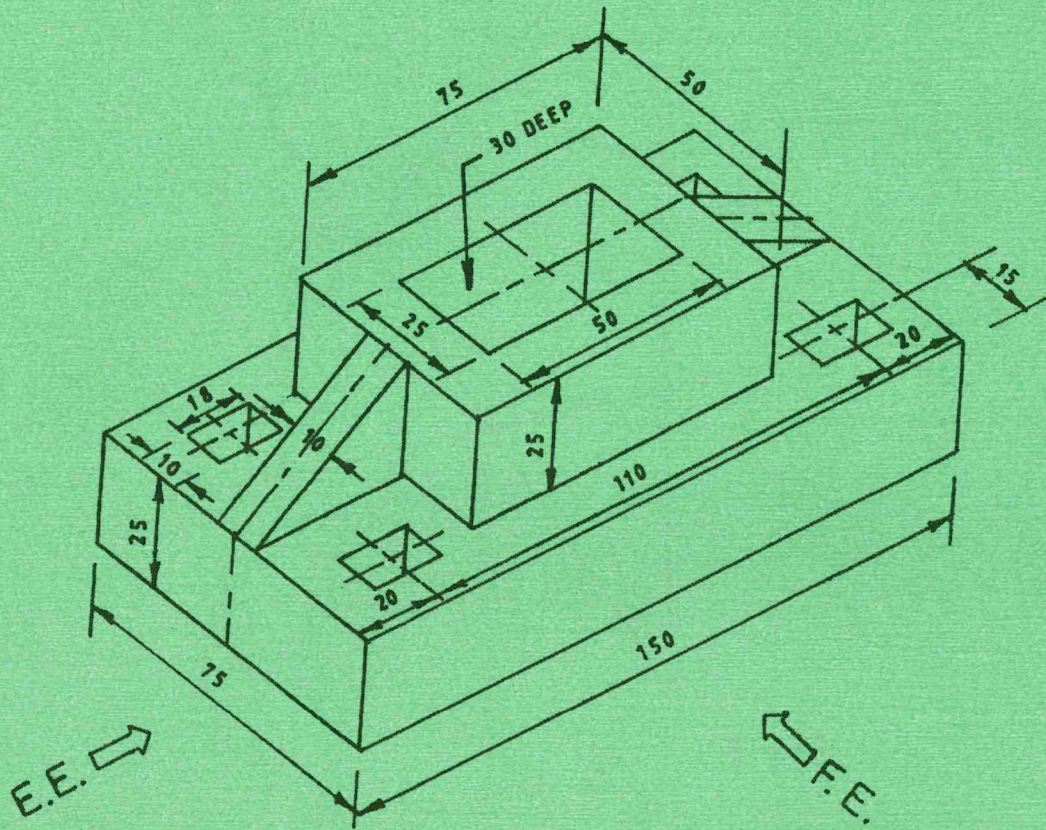


Fig. 4

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