

2506/104

2507/104

ENGINEERING DRAWING

Oct./Nov. 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 papers 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 ONE 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 5 printed pages and 1 insert size A3.

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)

Answer question ONE (COMPULSORY)

1. Figure 1 shows details of a governor arm. Assemble the parts and draw full size, the following views:
- (a) sectional front view on a plane which passes vertically through the axis of the 32 mm diameter hole of the governor arm.
 - (b) a view from the left-hand side.

Provide a parts list and show six major dimensions.

(40 marks)

SECTION B (60 marks)

Answer THREE questions from this section.

2. Figure 2 shows two views of a dovetail slide drawn in third angle projection. Draw an isometric view of the slide, taking A as the lowest point. (20 marks)

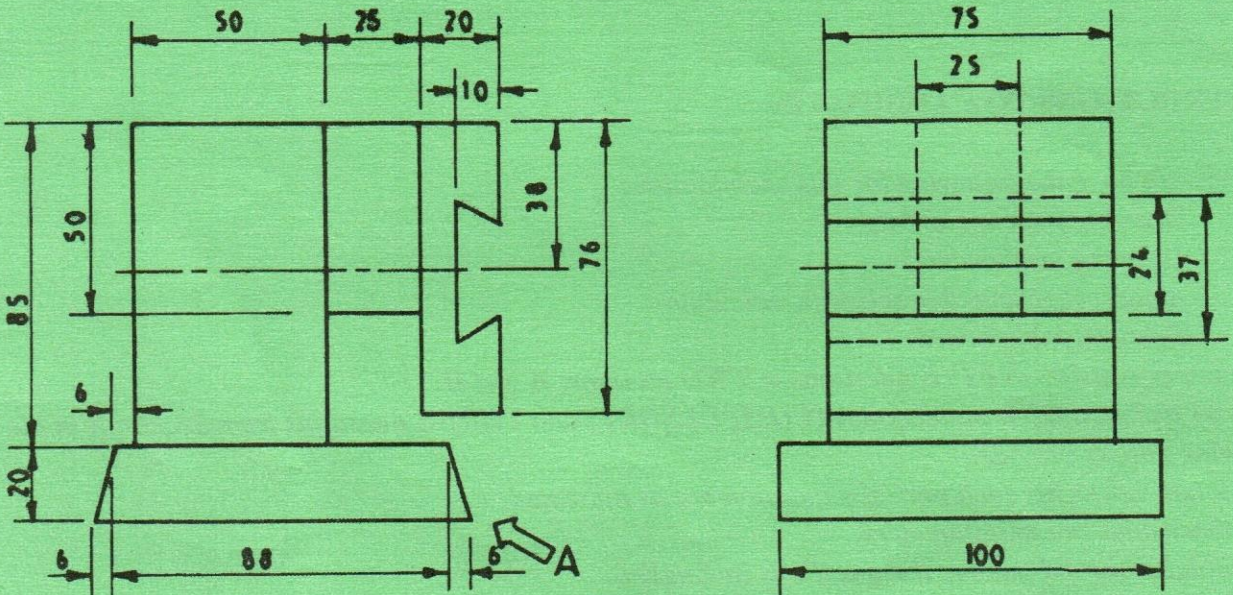


Fig. 2

3. ✓ Figure 3 shows a hexagonal pyramid whose axis is 70 mm long. It is cut by a sectional plane at 45° inclined to the horizontal plane and passing through the mid point of the axis. Copy the given views and:

- (a) complete the plan;
- (b) draw true shape of the section;
- (c) construct surface development of the remaining part of the solid.

(20 marks)

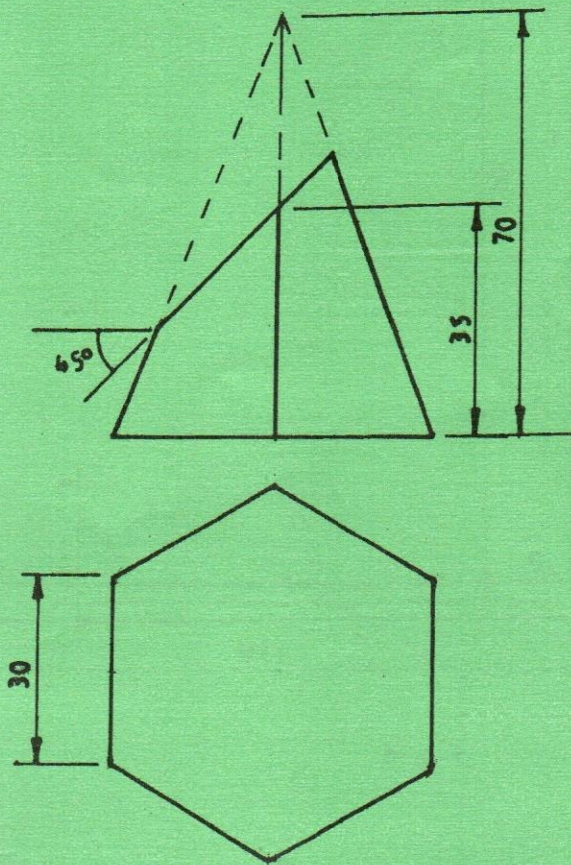


Fig. 3

4. On top of a folding mechanism, PQ 110 mm long is constrained to slide in a vertical and horizontal guide as shown in figure 4. Draw the locus of the point T, which is mid-point of the rod QP, as P moves horizontally from point A to B. (20 marks)

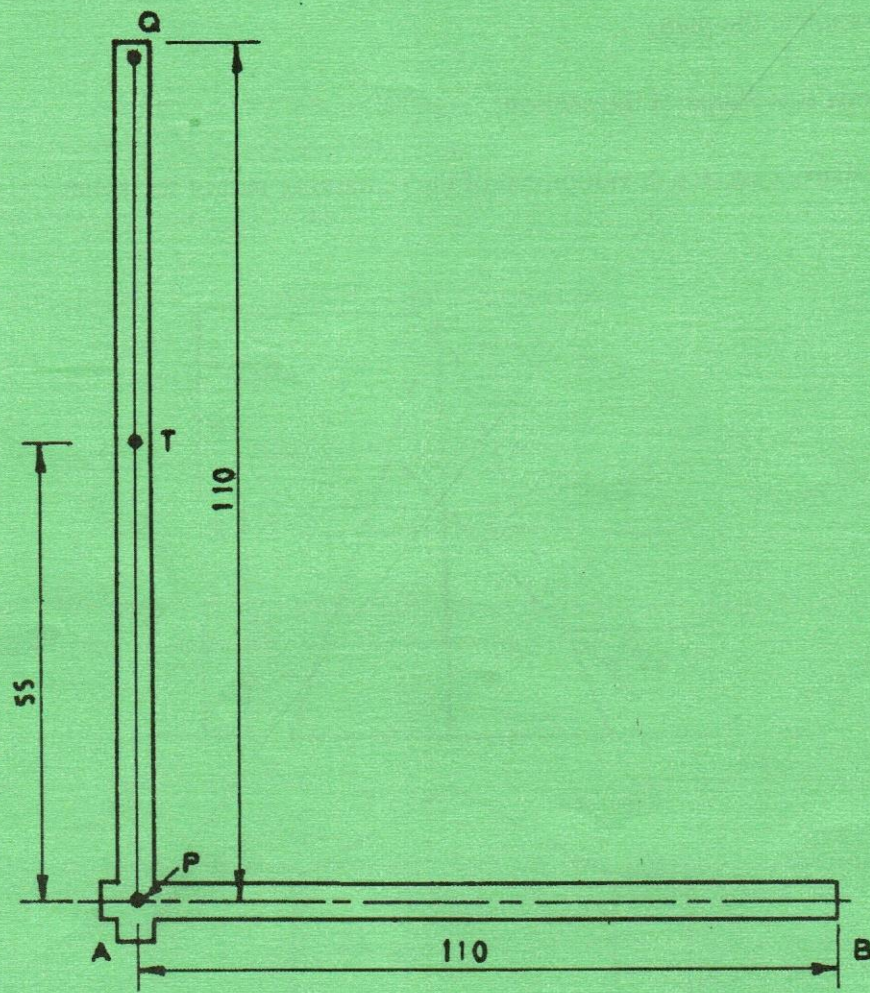


Fig. 4

5. Figure 5 shows a front view of a machined component and its auxiliary plan view drawn in third angle projection from direction A.

(a) copy the given views; (8 marks)

(b) project an end view from the right-hand side. (12 marks)

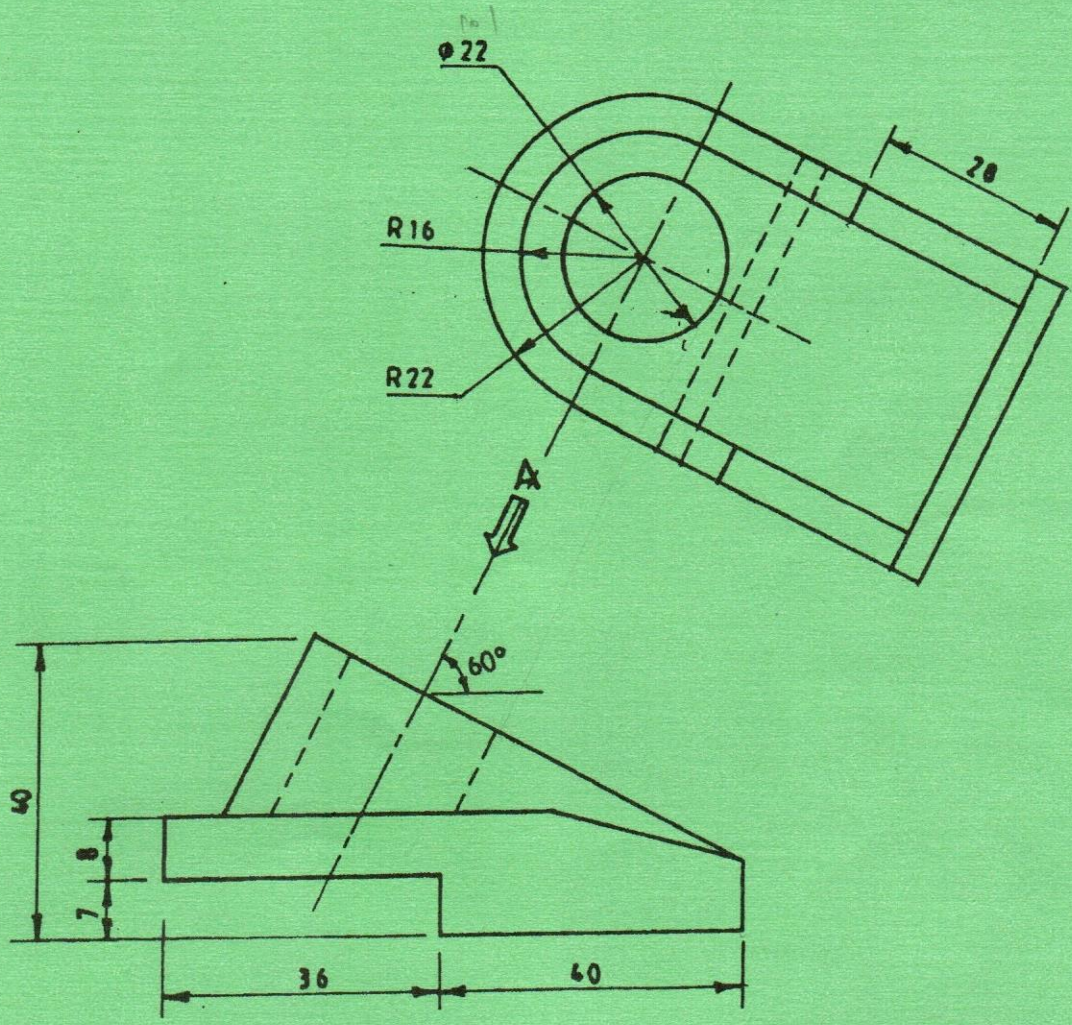


Fig. 5

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Handwritten notes: 27, 15, 25