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ENGINEERING DRAWING I

June/July 2020

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL
DIPLOMA IN MECHANICAL ENGINEERING
(PLANT OPTION)
DIPLOMA IN AUTOMOTIVE ENGINEERING
DIPLOMA IN CONSTRUCTION PLANT ENGINEERING
MODULE I

ENGINEERING DRAWING I

3 hours

INSTRUCTIONS TO CANDIDATES

The candidate should have the following for this examination:

Answer booklet;

Drawing papers;

Drawing board/table.

This paper consists of TWO sections: A and B.

Answer BOTH questions from section A (compulsory) and any TWO questions from section B.

Maximum marks to each part of a question are indicated.

All dimensions are in millimeters.

Candidates should answer the questions in English.

This paper consists of 8 printed pages.

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



- (b) Figure 3 shows a pin jointed mechanism. The cranks AB and CD revolve about A and C respectively at the same speed. Draw the loci of points E and F. (15 marks)

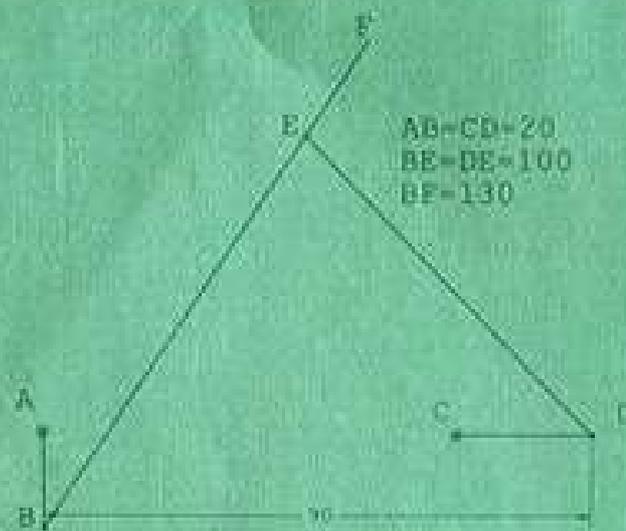


Fig. 3



SECTION B

Answer at TWO questions from this section.

3. (a) Figure 4 shows two views of a triangle ABC. Construct the true shape of the triangle and state the size of its sides. (10 marks)

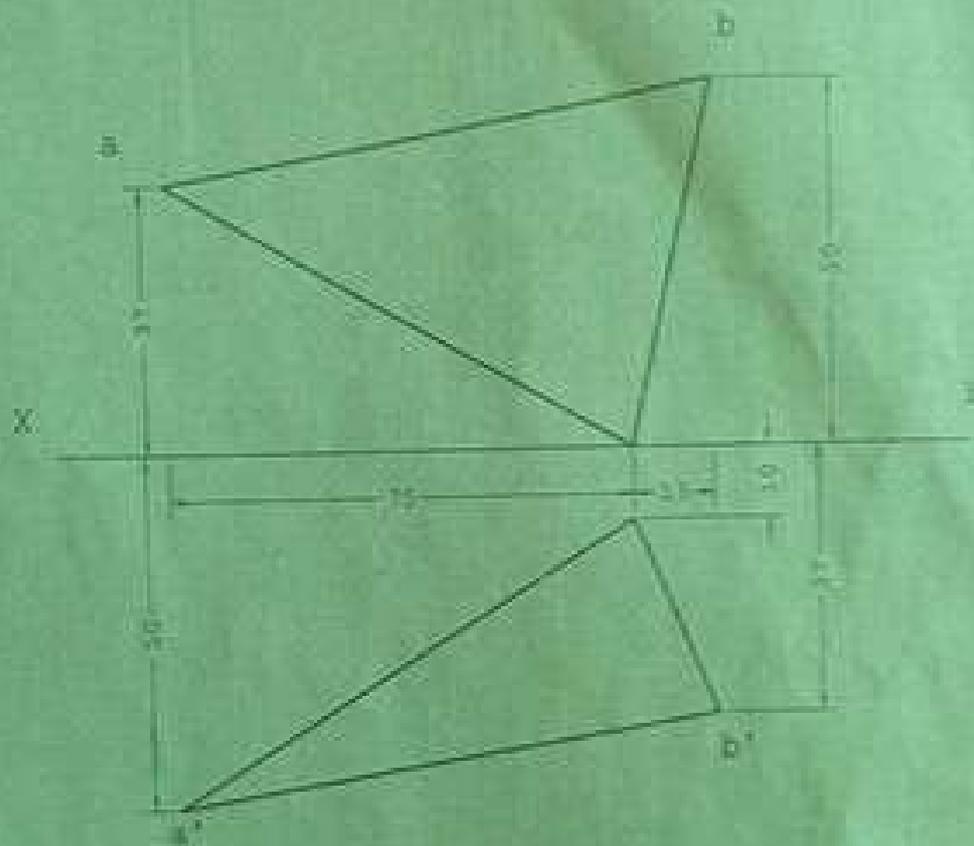


Fig 4



(b) Figure 5 shows a trip lever. Construct the profile and show the construction lines. (10 marks)

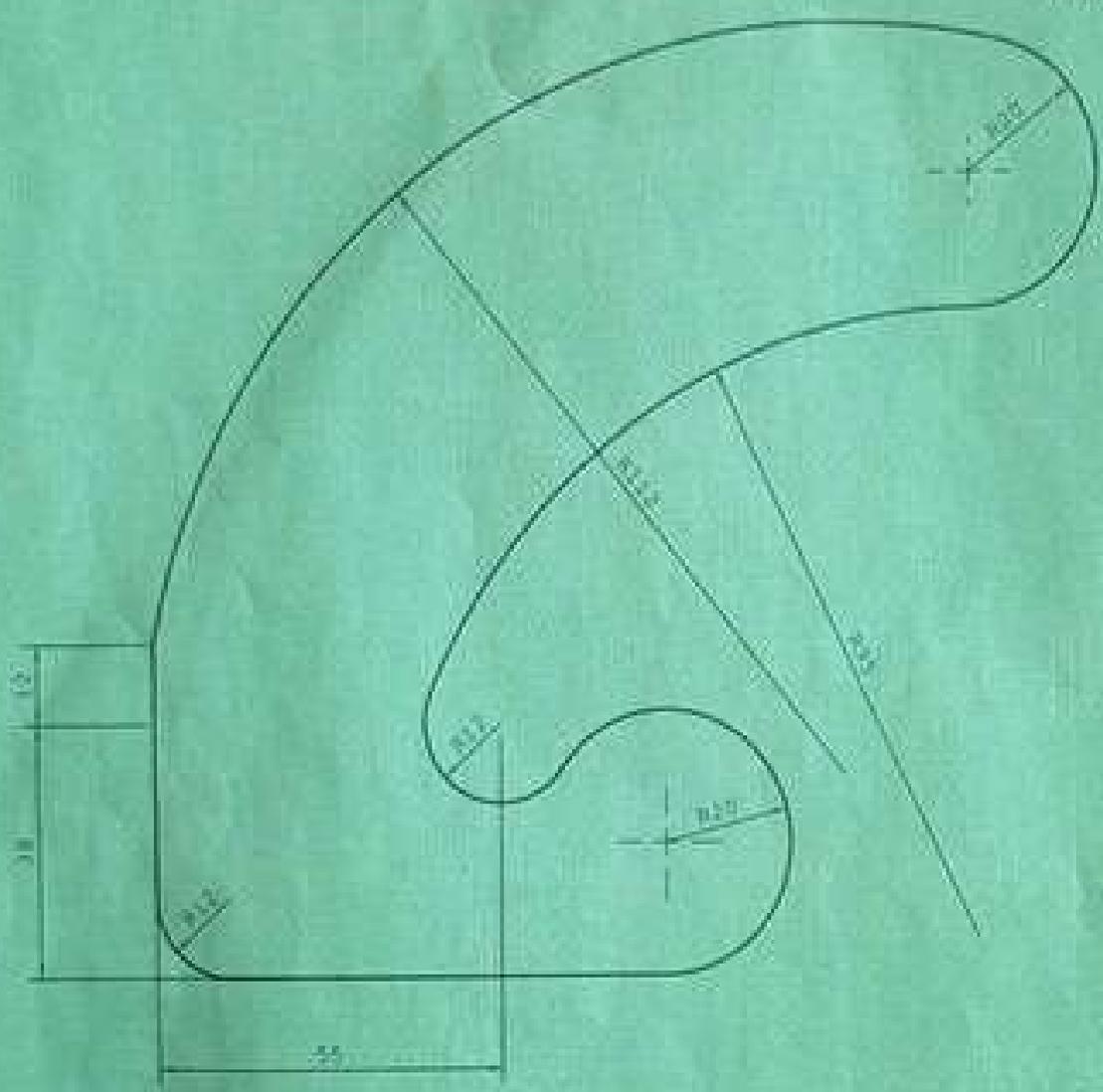


Fig. 5

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4. Figure 6 shows two views of the intersection between two cylinders. Complete the views and draw the surface development of the smaller prism. (20 marks)

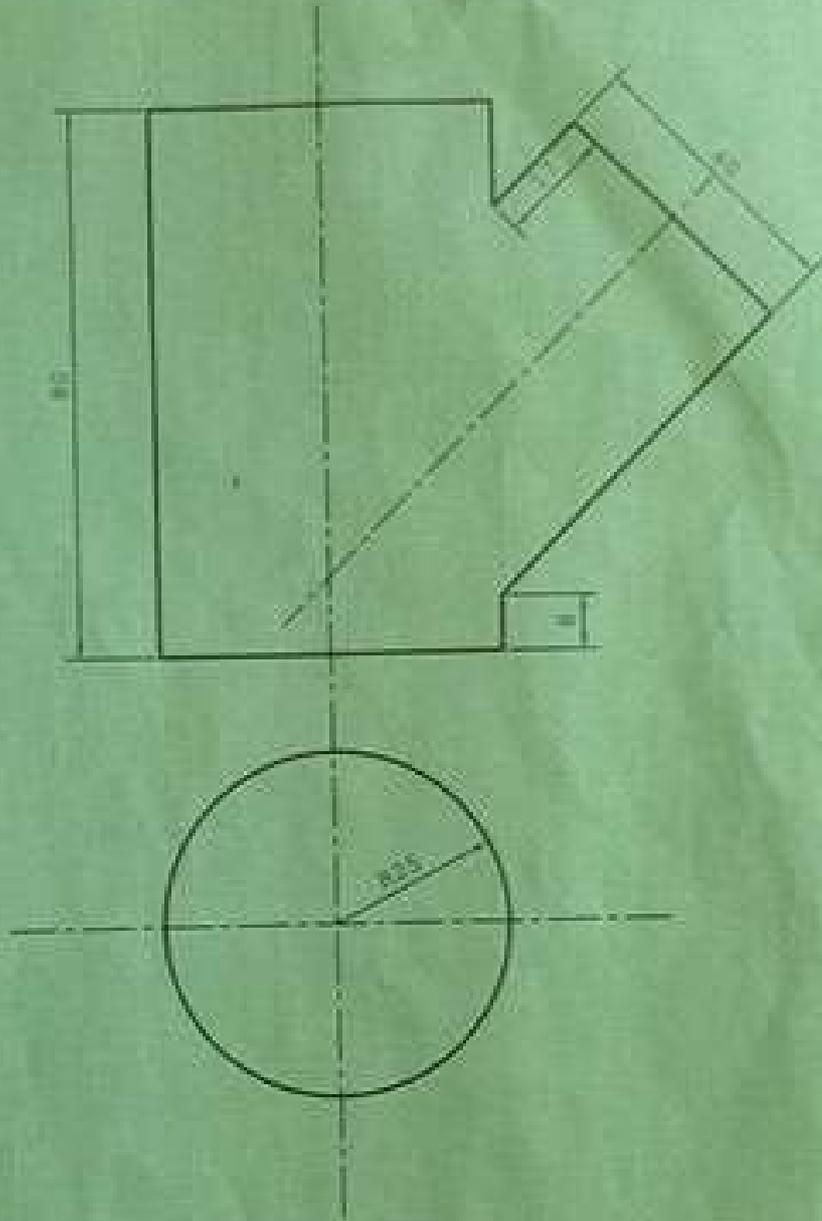


Fig 6

5. (a) Shown in Figure 5(a) is a triangle ABC, construct a square equal in area to the given triangle. (8 marks)

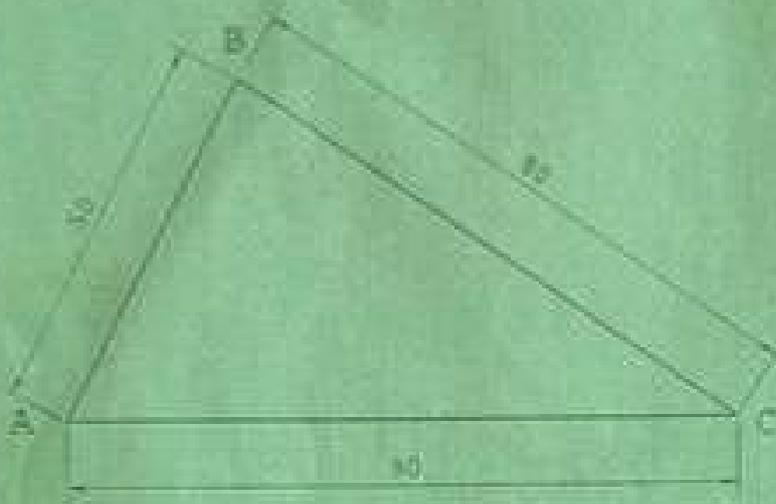
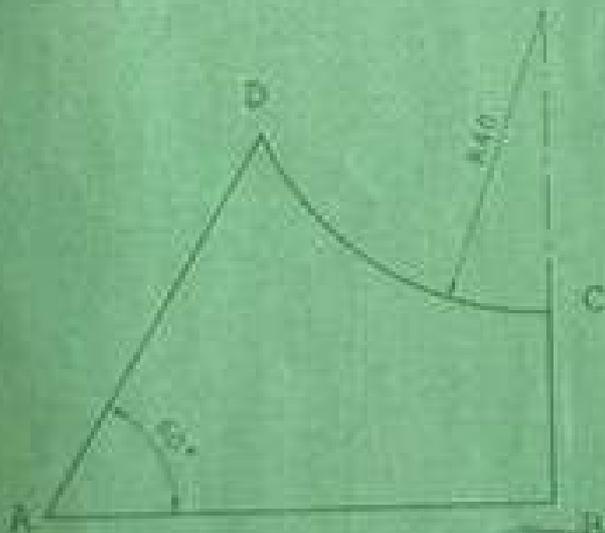


Fig 7

- (b) Figure 5(b) shows the profile of a template, copy the template and enlarge it so that its new area is twice that of the original. (12 marks)



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