2502/104
2503/104
2509/104
ENGINEERING DRAWING
June/July 2018
Time: 3 hours

THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN MECHANICAL ENGINEERING (PLANT OPTION)
DIPLOMA IN AUTOMOTIVE ENGINEERING
DIPLOMA IN MECHANICAL ENGINEERING (CONSTRUCTION PLANT OPTION)

MODULE I

ENGINEERING DRAWING

3 hours

INSTRUCTIONS TO CANDIDATES

The candidate should have the following for this examination:
   Answer booklet;
   Drawing instruments;
   A3 Drawing papers.
This paper consists of TWO sections; A and B.
Answer all the questions from section A 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 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.

Turn over

4.   (a)   Two circles A and B have radii of 39 mm and 11 mm respectively. If their centres are
               90 mm apart, draw their common internal tangent.   (6 marks)

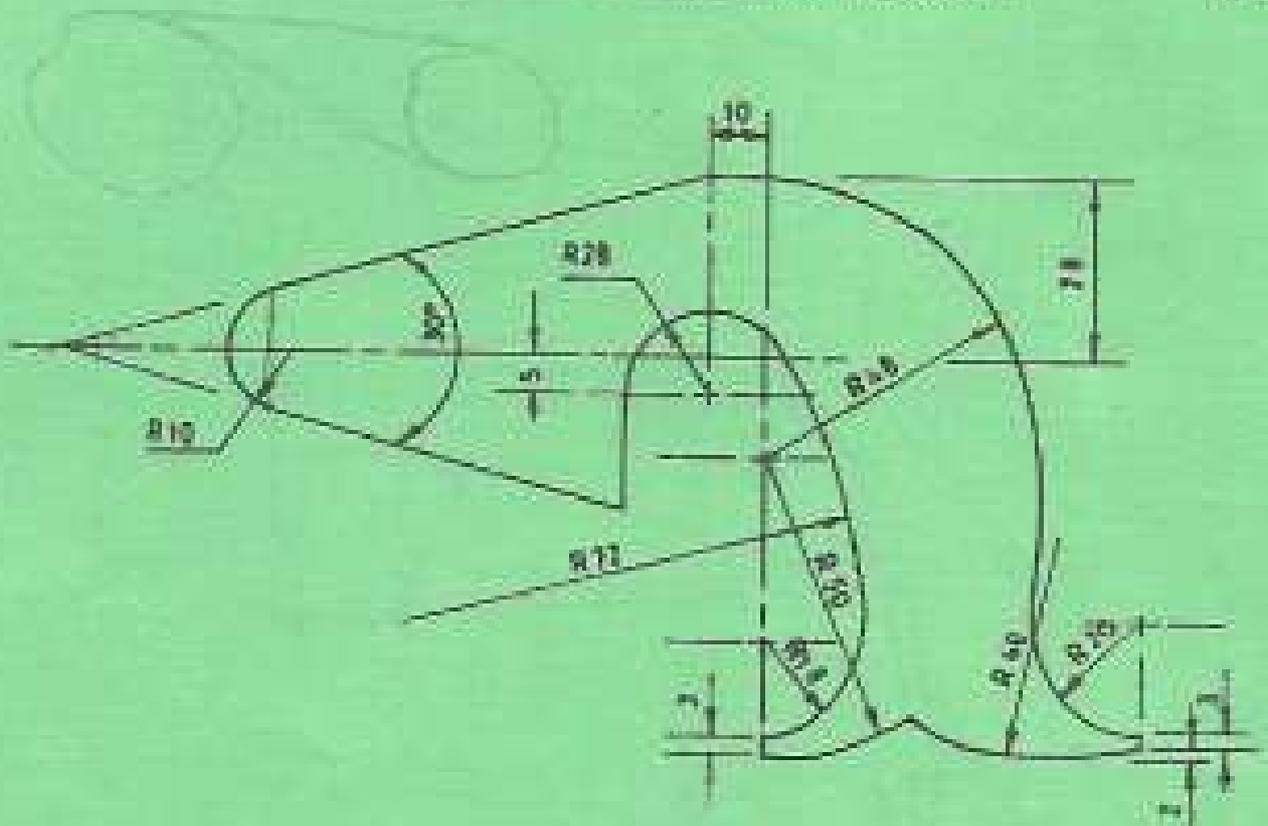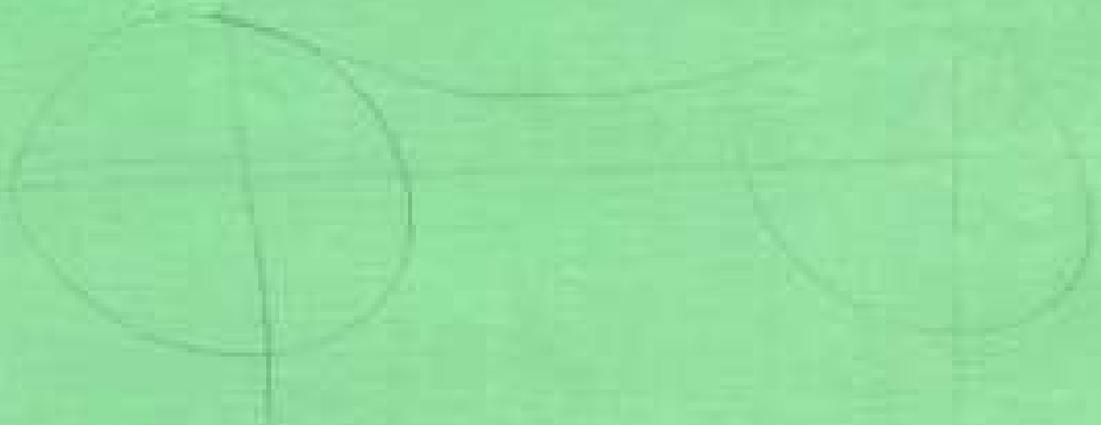   (b)   **Figure 4** shows a key hole-saw handle. Construct the profile.   (14 marks)

Fig. 4

2. Figure 2 shows the views of a machine part drawn in first angle projection. Draw the isometric view with corner M as the lowest point.
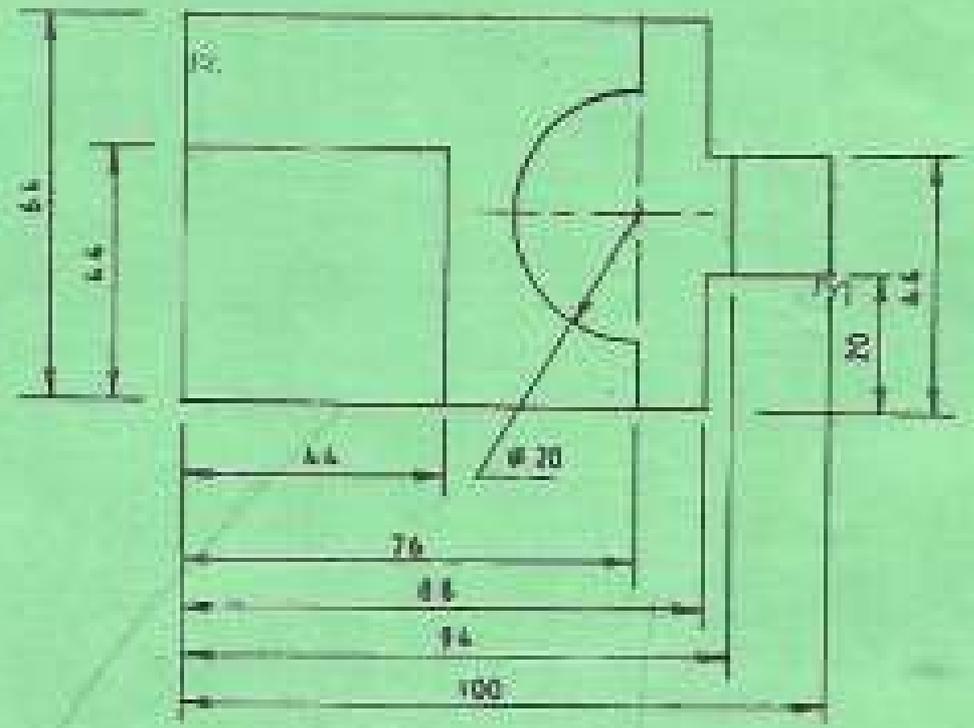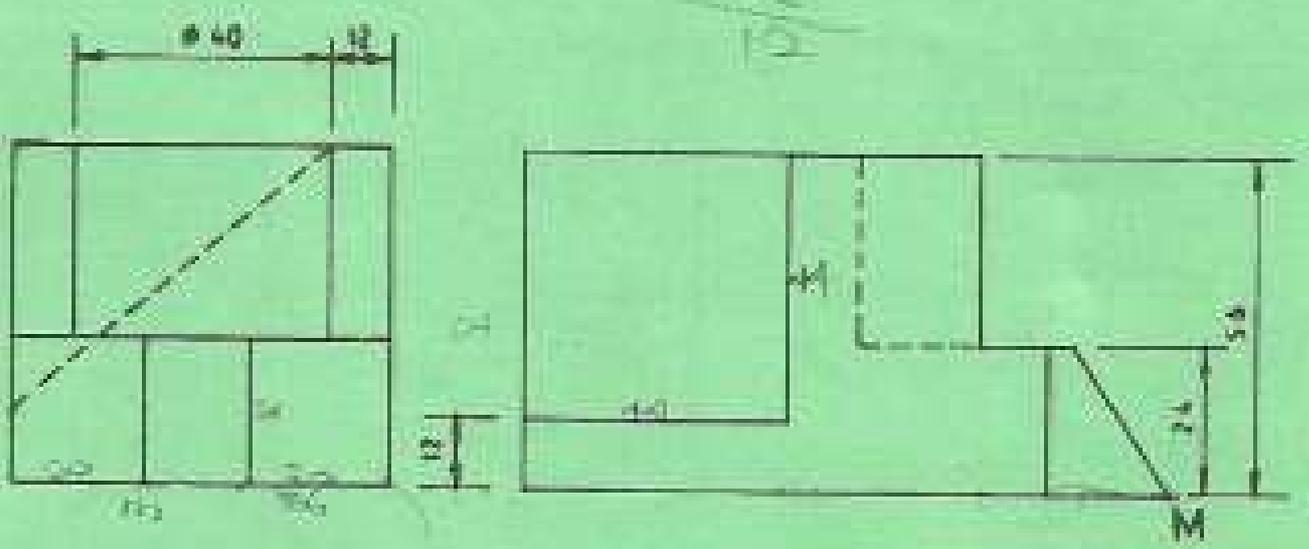
Fig. 2

Answer ALL the questions from this section.

1.   **Figure 1** shows a pictorial view of a machine block. Draw the following views in first angle projection:

(a)   a front elevation in the direction of arrow A;
(b)   an end elevation in the direction of arrow;
(c)   a plan

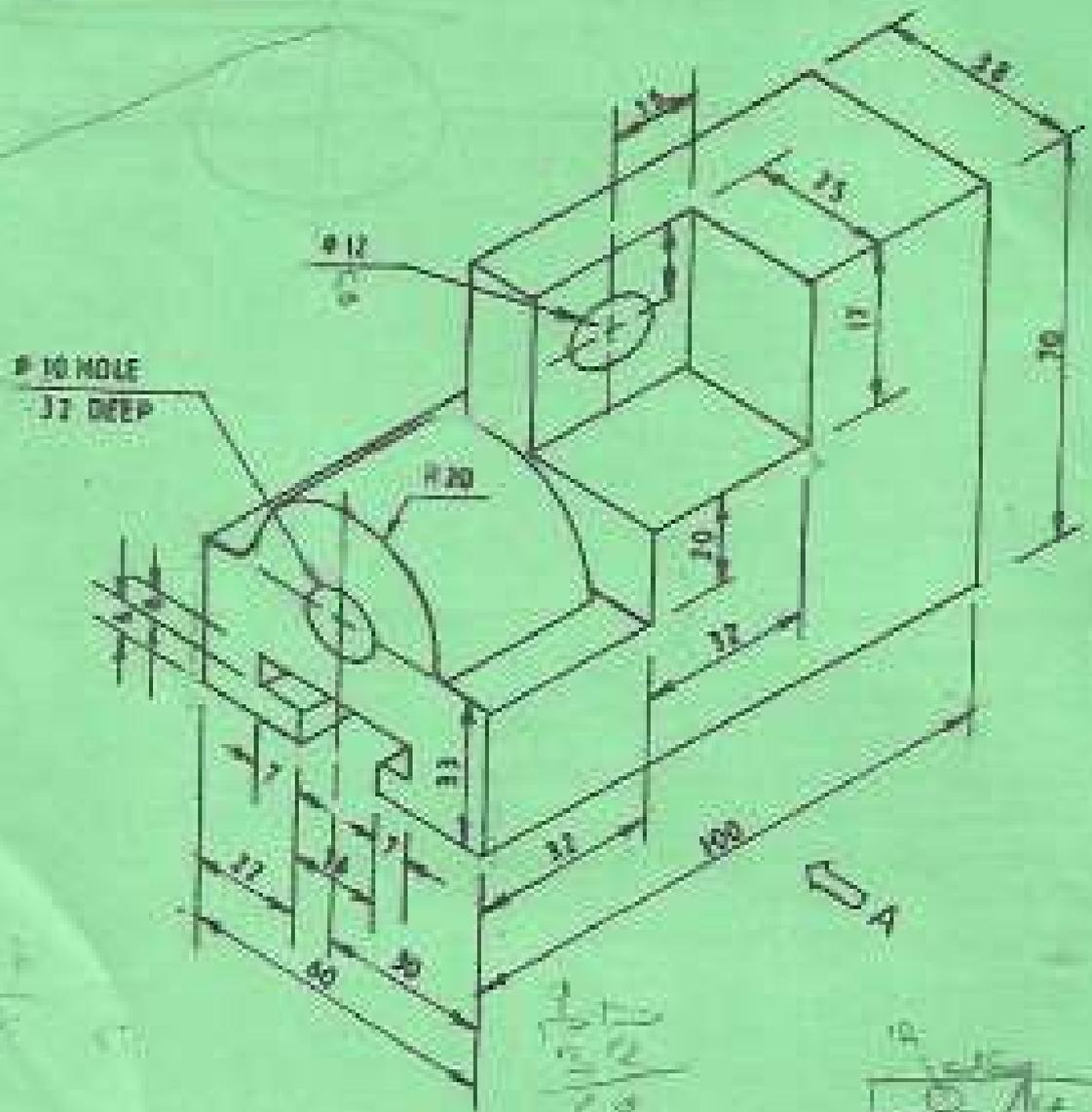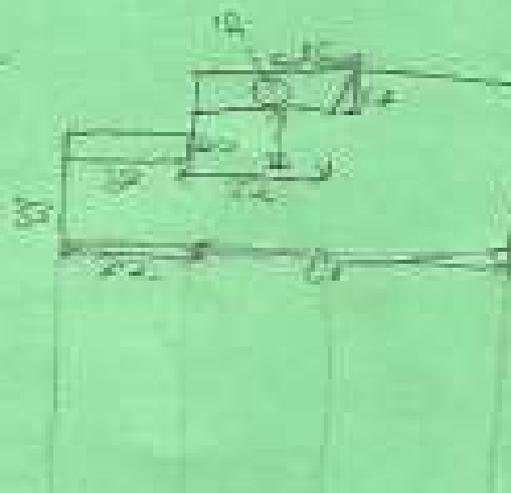- Show all the hidden details.
- Insert six major dimensions.

(30 marks)

Fig. 1

Answer any TWO questions from this section.

5. Figure 3 shows the intersection of a cone and a cylinder. Copy the given views then:

    (a)   complete the front elevation;

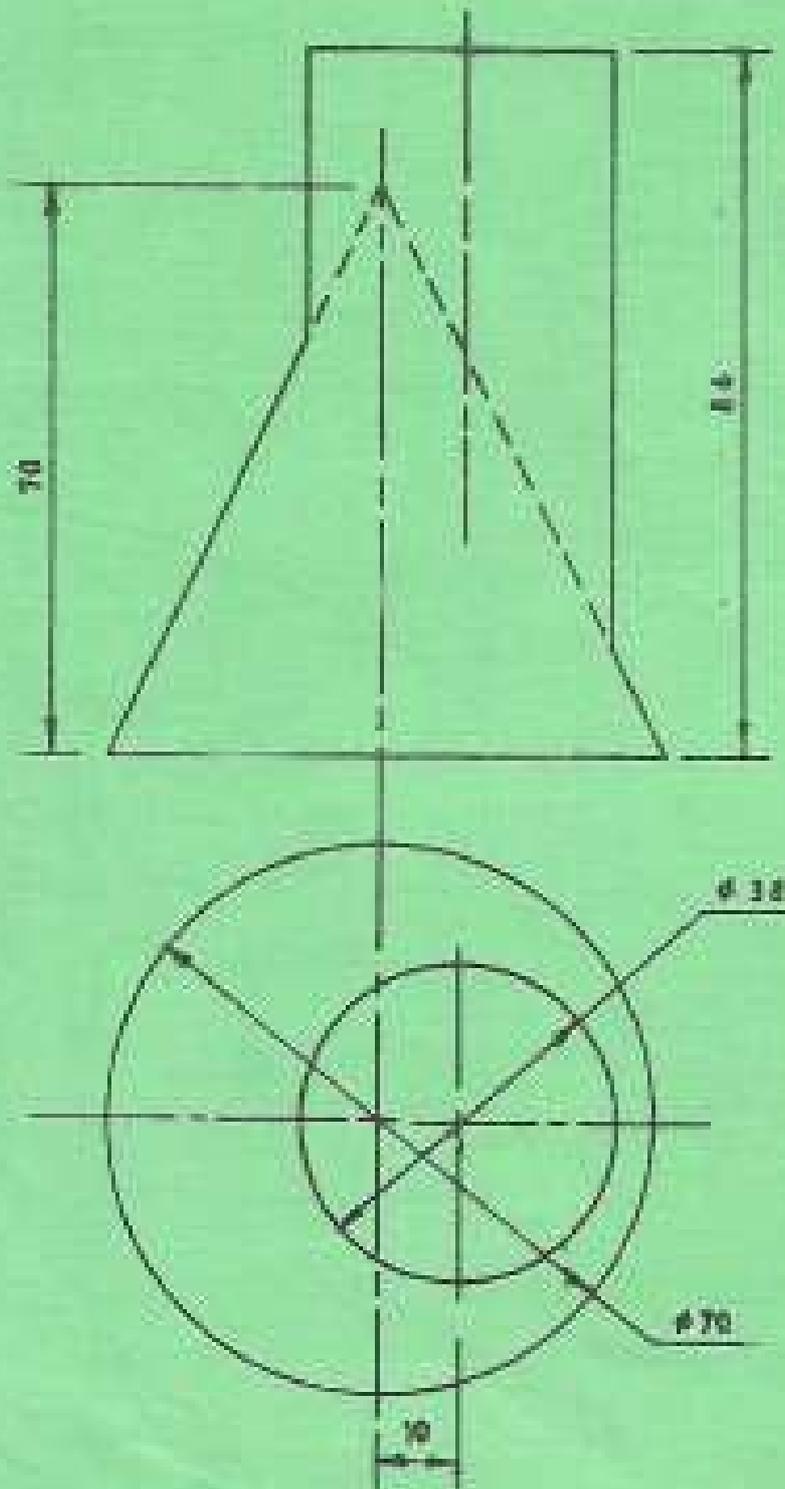   (b)   draw the surface development of the cylinder.   (20 marks)

Fig. 3

5. (a) Plot the locus of point P which moves such that its distance from two fixed points R and S, 75 mm apart is always in the ratio 2:1 respectively. (10 marks)

(b) **Figure 5** shows the front elevation and plan of a triangular lamina ABC. Construct the true shape of the lamina. (10 marks)
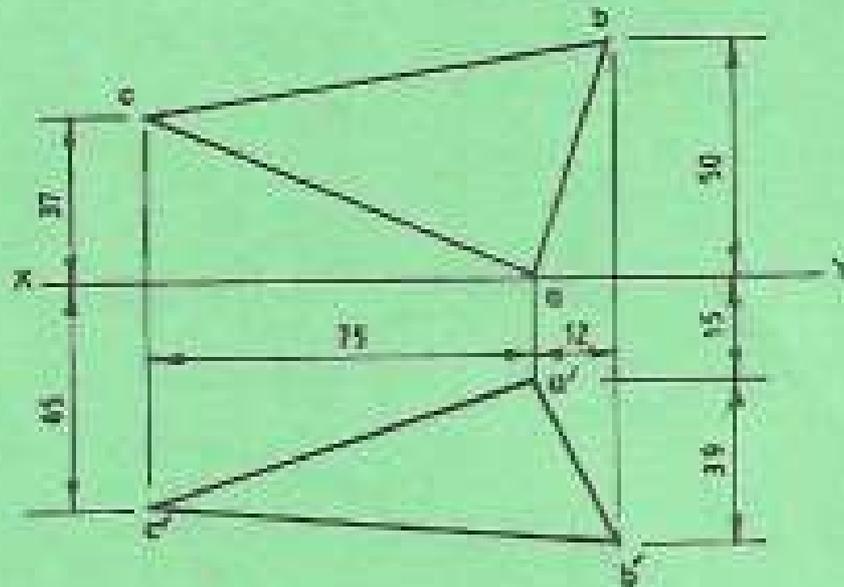

Fig. 5

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