

2503/104
BASIC ENGINEERING DRAWING
Oct./Nov. 2011
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

**TECHNICAL, INDUSTRIAL, VOCATIONAL AND ENTREPRENEURSHIP
TRAINING
DIPLOMA IN AUTOMOTIVE ENGINEERING
MODULE I**

**BASIC ENGINEERING DRAWING
3 hours**

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Drawing paper;

Drawing instruments;

This paper consists of TWO sections A and B.

Answer ALL questions in section A (Compulsory) and any TWO questions from section B.

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

All dimensions are in millimetres.

This paper consists of 5 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 (Compulsory)

Answer ALL questions for this section.

1. **Figure 1** shows three view of a bracket in First Angle projection. Draw full size an isometric view of the bracket. (30 marks)

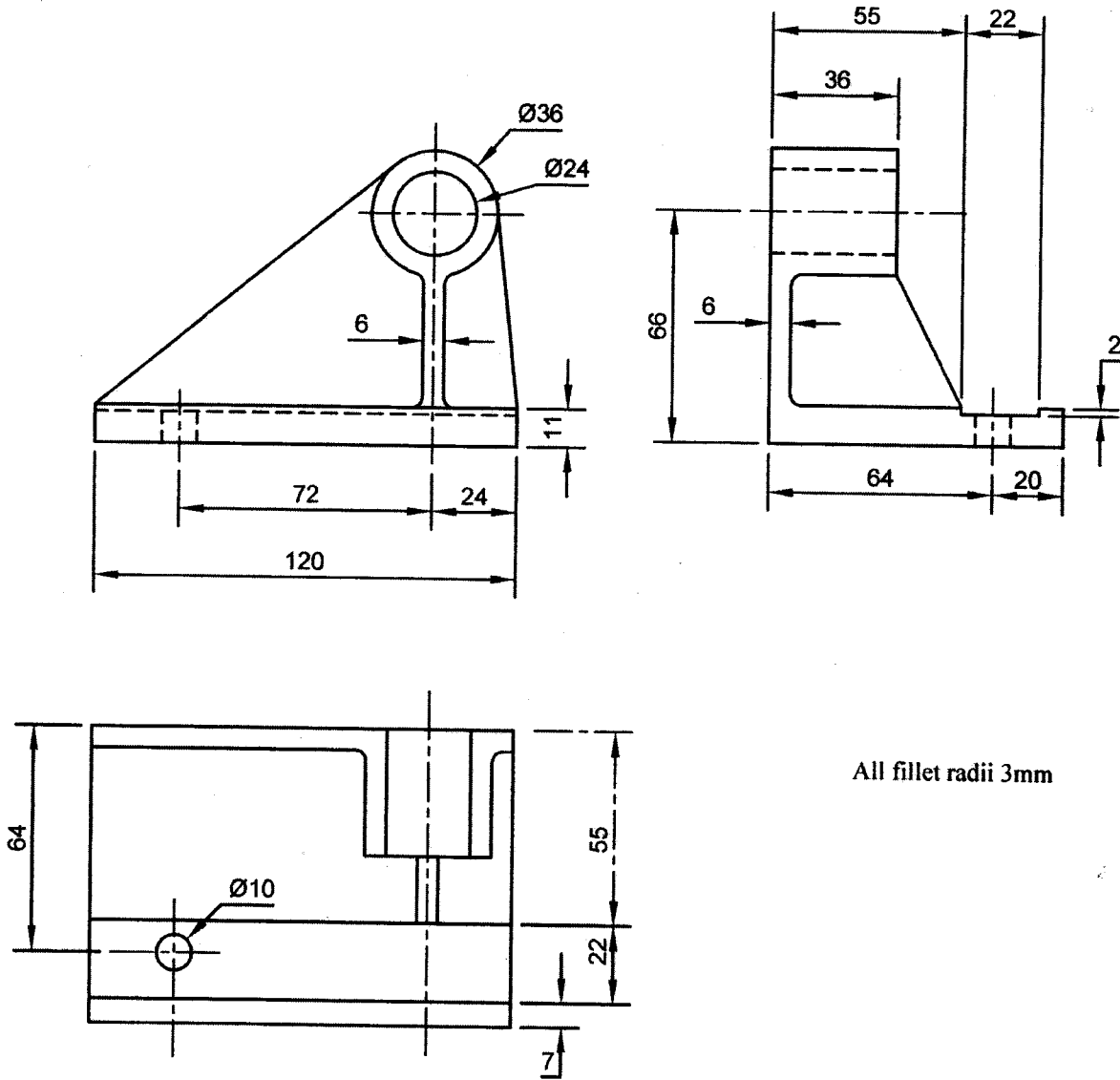


Figure 1

2. **Figure 2** shows two unequal cylinders intersecting each other at an angle. Complete the plan and construct the following:
- (a) line of intersection in the front elevation;
 - (b) surface development of cylinder B.
- (30 marks)

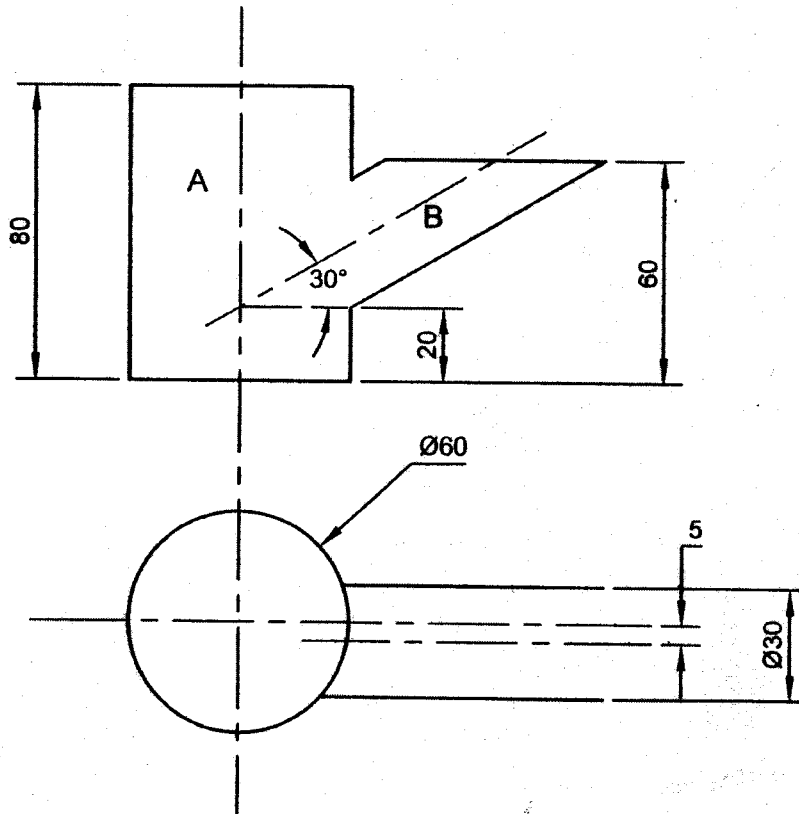


Figure 2

5. (a) The elevation and traces of line ab are shown in **Figure 5(a)**. Find:
- its true length;
 - the angles of inclination with respect to both the horizontal and vertical axis.
- (5 marks)

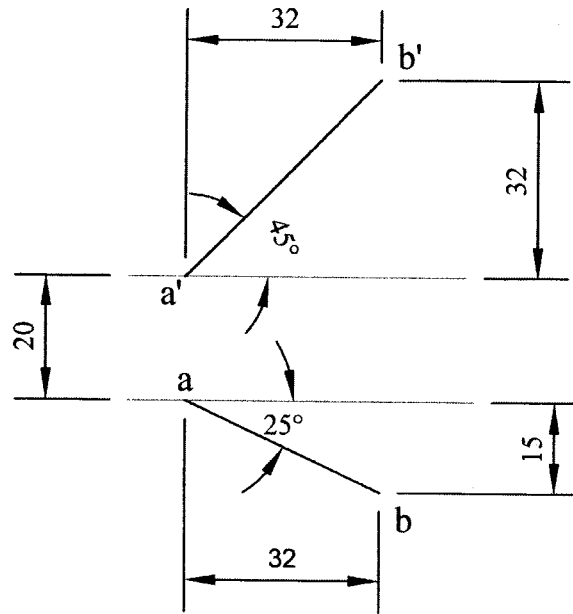


Figure 5a

- (b) **Figure 5(b)** shows the elevation and plan of an inclined lamina - copy the given views and project the following:

- true shape of lamina;
 - true angle of inclination.
- (15 marks)

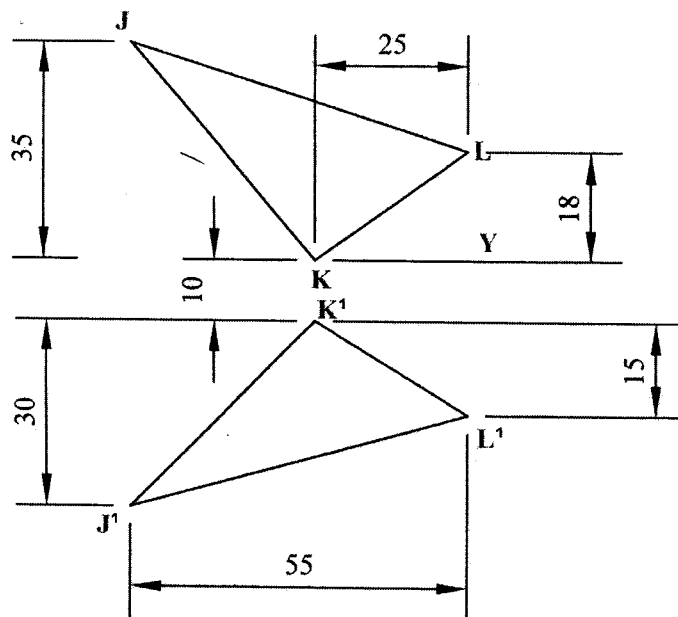


Figure 5b