

2502/104

2503/104

2509/104

ENGINEERING DRAWING

Oct./Nov. 2017

Time: 3 hours



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

MODULE 1

ENGINEERING DRAWING

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Answer booklet;

Drawing instruments;

Drawing papers.

This paper consists of TWO sections: A and B.

Answer Question 1 (compulsory) in section A and any THREE 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.

SECTION B

Answer *THREE* questions from this section.

2. Figure 2 shows two views of a mild steel bracket. Draw an isometric view of the bracket with point *x* as the lowest point. (20 marks)

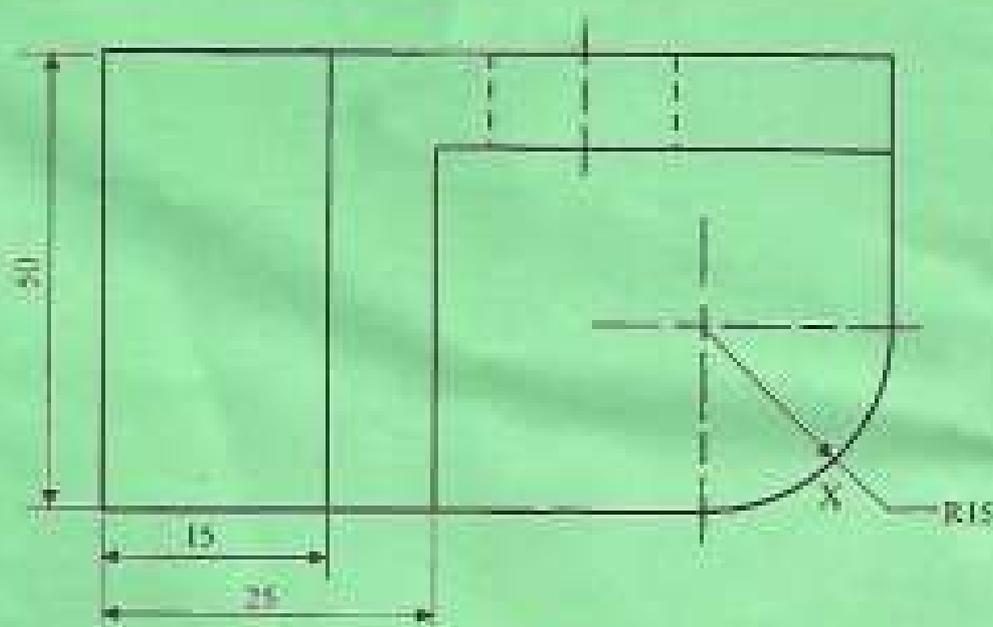
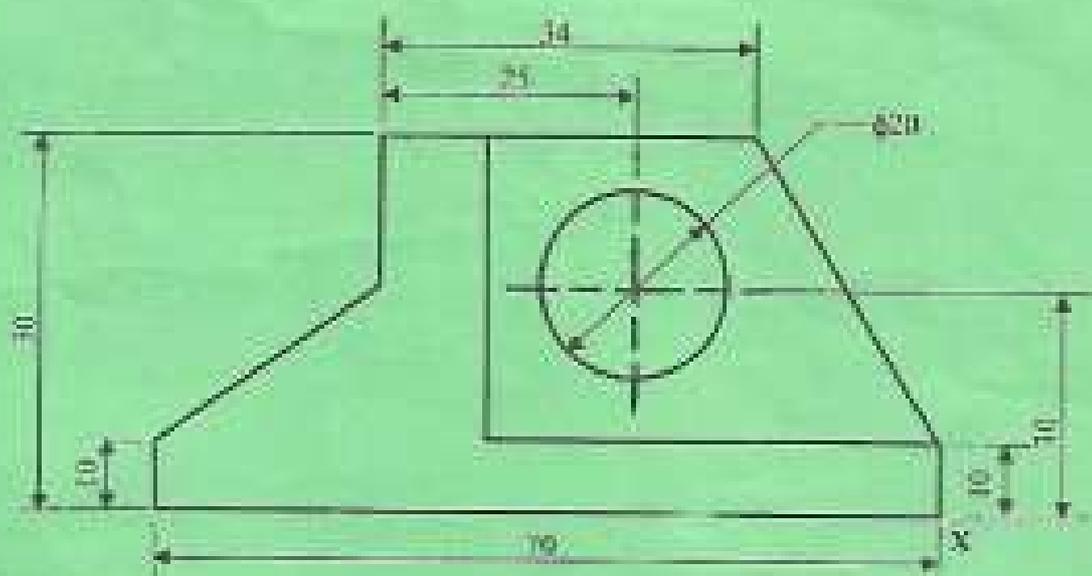
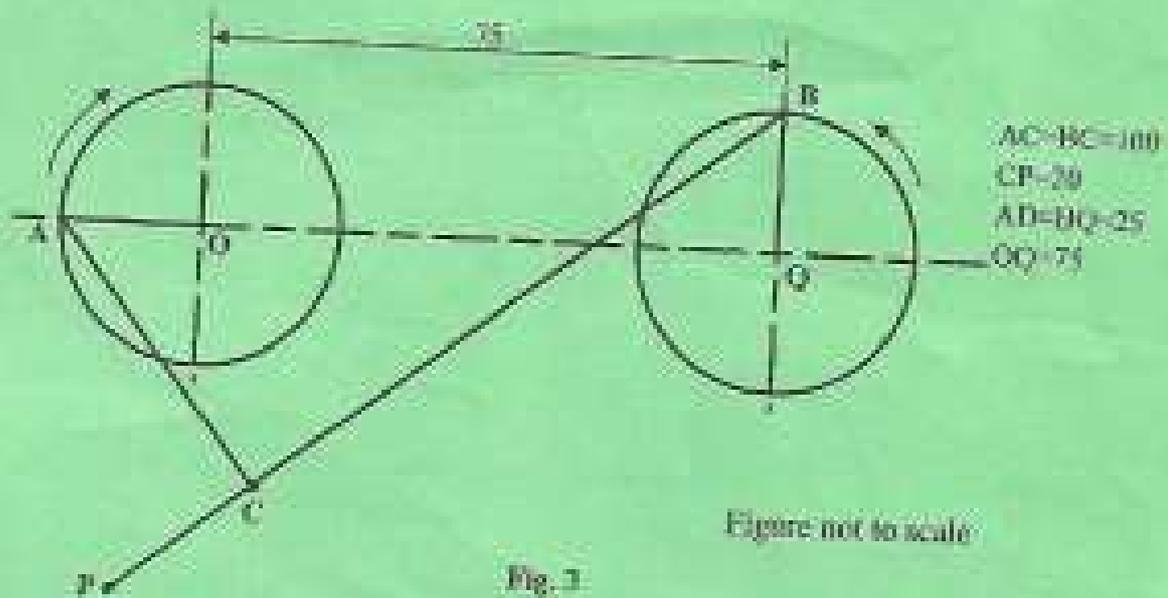


Fig. 2

3. (a) Construct the epicycloid for a rolling circle of radius 45 mm and base circle of radius 92 mm. (8 marks)
- (b) Figure 3 shows a mechanism with cranks AO and BQ revolving in opposite directions at the same speed and are joined by the rods AC and BCP. Plot the locus of P for one revolution of the cranks, if AO and BQ are 25 mm, AC and BC is 100 mm each while CP is 20 mm. (12 marks)



4. Figure 4 shows the intersection of two cylinders. Copy the given views and draw:

- (a) the line of intersection;
- (b) the surface development of the minor cylinder Y.

(20 marks)

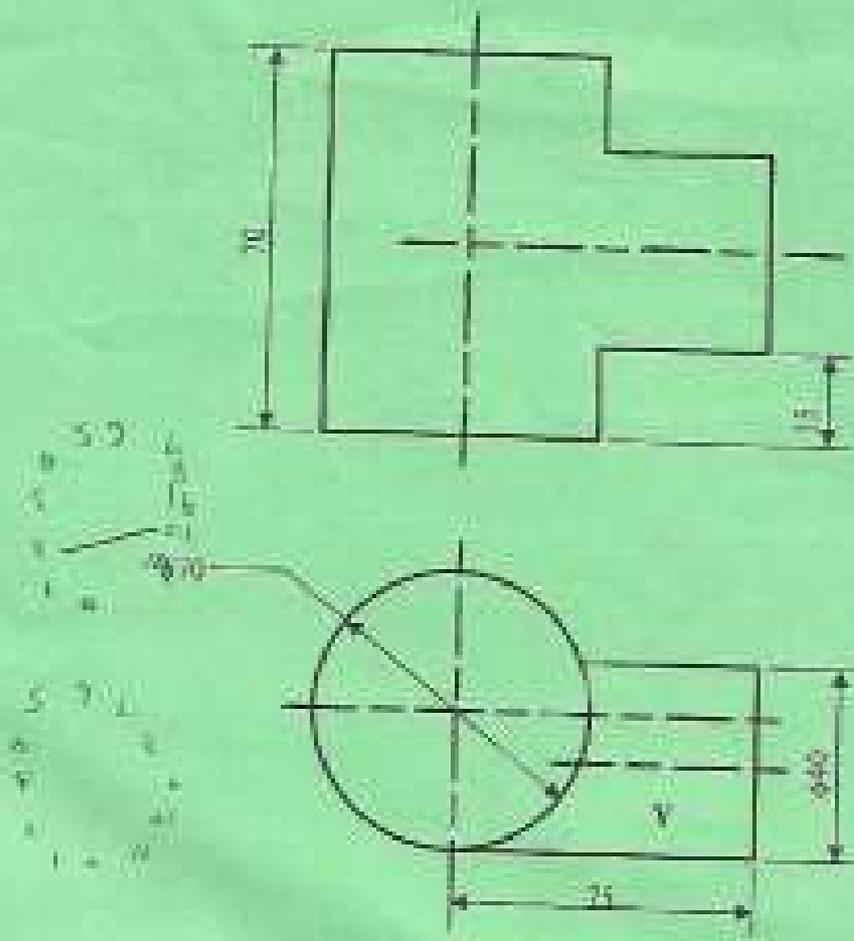


Fig. 4

5. (a) Construct a triangle with a perimeter of 170 mm, whose sides are in the ratio 2 : 3 : 5. (6 marks)
- (b) Figure 5 shows a rocker arm. Construct the profile showing all your construction work clearly. (14 marks)

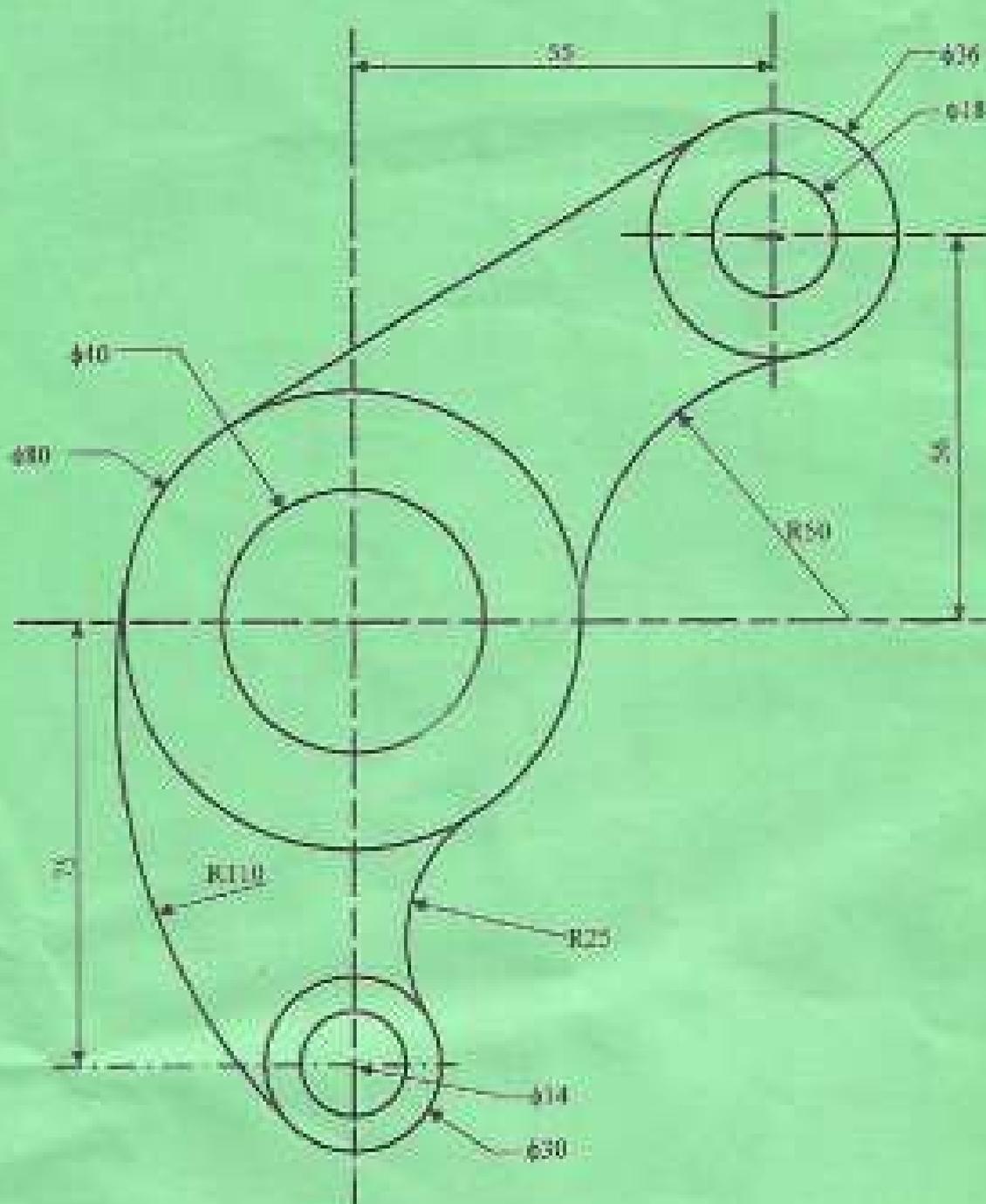


Fig. 5

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ENGINEERING DRAWING

June/July 2018

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

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(PLANT OPTION)

DIPLOMA IN AUTOMOTIVE ENGINEERING

DIPLOMA IN MECHANICAL ENGINEERING
(CONSTRUCTION PLANT OPTION)

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