

1503/104
TECHNICAL DRAWINGS
Oct./Nov. 2015
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL
CRAFT CERTIFICATE IN AUTOMOTIVE ENGINEERING
MODULE I

TECHNICAL DRAWING

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Drawing paper(s);

Drawing instruments.

This paper consists of THREE sections: A, B and C.

Answer a total of FIVE questions as follows:

Answer question 1(compulsory), then answer TWO questions from sections B and TWO questions from section C.

Maximum marks in each part of the question are indicated.

All dimensions are in millimetres.

Section	Question	Maximum Marks	Candidate's Score
A		40	
B		15	
		15	
C		15	
		15	
TOTAL SCORE		100	

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 question are missing.

SECTION A: (COMPULSORY)

1. Figure 1 shows a pictorial view of a tipping gear bracket. Draw the following views in first angle projection.

- (i) a section front elevation on X-X;
- (ii) an end elevation in the direction of arrow E;
- (iii) a plan.

- include six major dimensions.
- Show hidden details.

(40 marks)

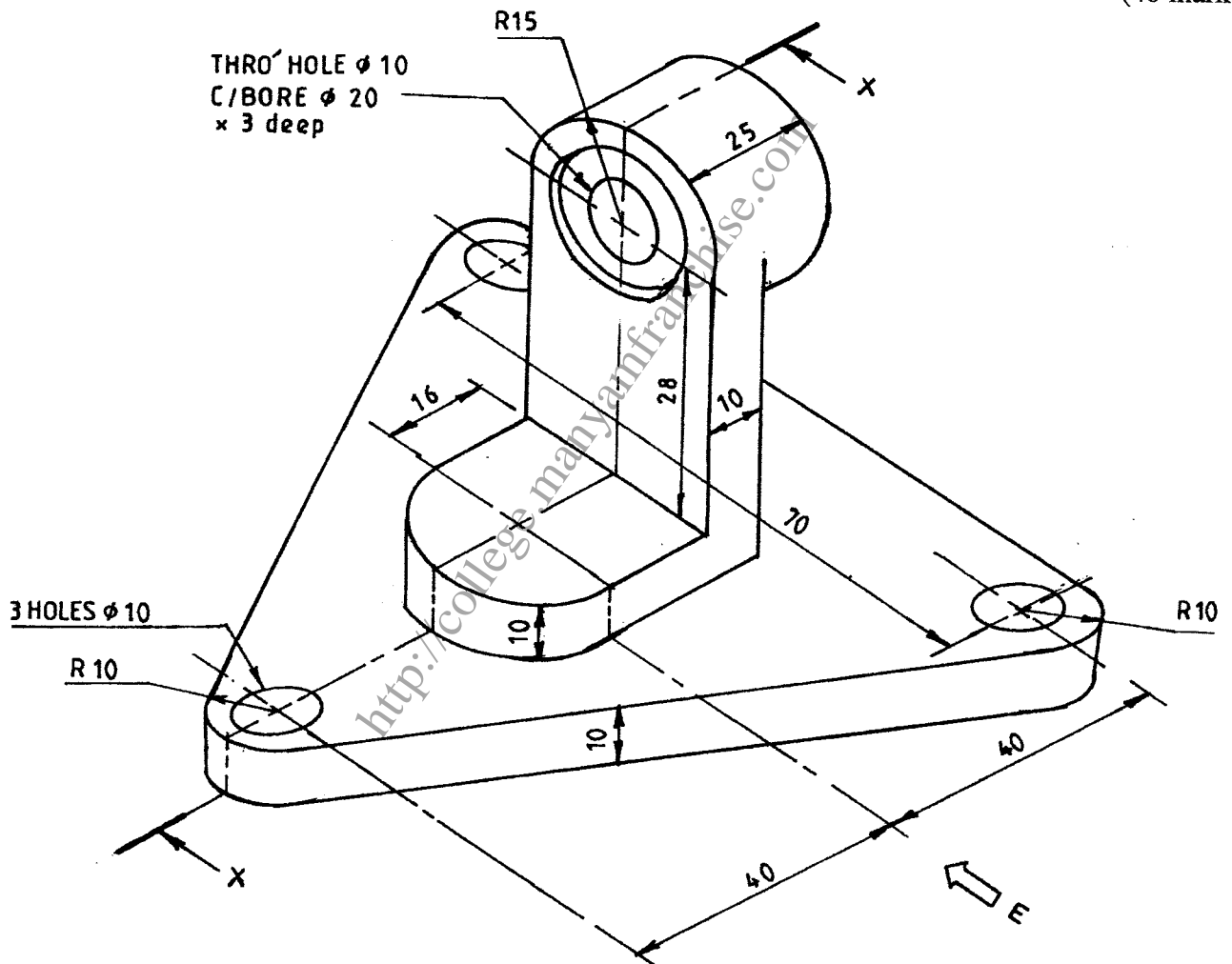
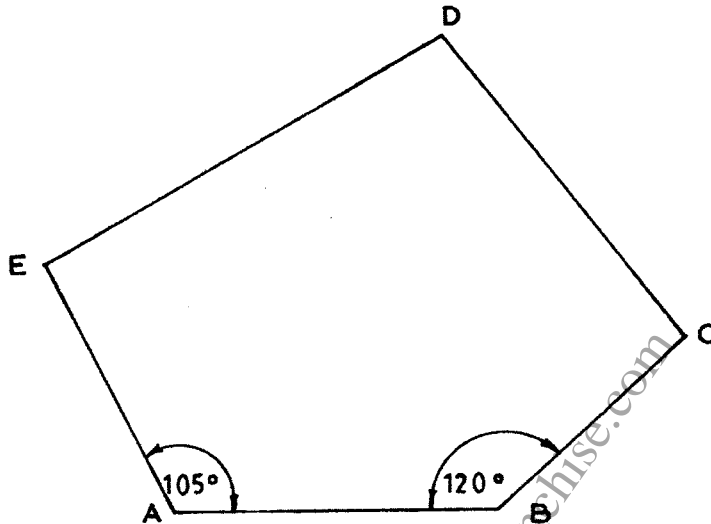


Fig. 1

SECTION B:

Answer **TWO** questions from this section.

2. Figure 2 shows a plate ABCDE. Draw the given view and construct a similar figure sides $\frac{8}{5}$ the length of the given figure. Take corner A as the centre of similitude. (15 marks)



AB	=	50
BC	=	40
CD	=	60
DE	=	80
EA	=	50

Fig. 2

3. (a) Plot the locus of a point P which moves such that its distance from two fixed points R and S, 50 mm apart is always in the ratio 2:1 respectively. (8 marks)
- (b) Construct an ellipse of minor and major diameter of 70 mm and 100 mm respectively. (7 marks)

4. Figure 3 shows the intersection between two unequal pipes. Copy the given views and

(i) complete the views;

(ii) draw the surface development of the smaller pipe slit along S-S.

(15 marks)

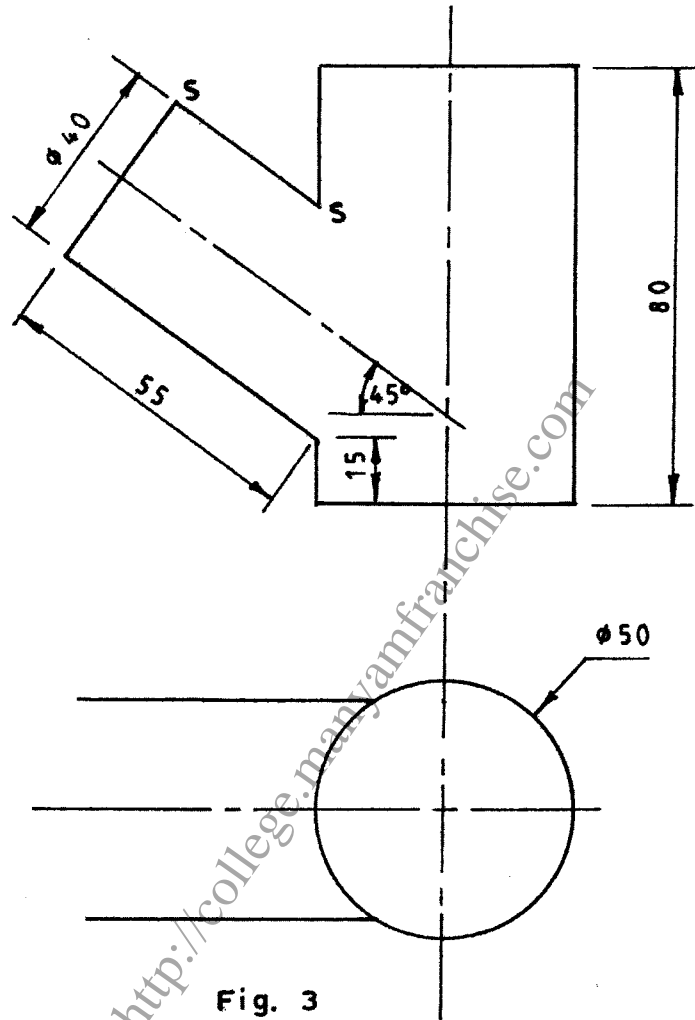


Fig. 3

SECTION C:

Answer TWO questions from this section.

5. Figure 4 shows two views of a machine block. Draw the block in isometric projection with corner X as the lowest. (15 marks)

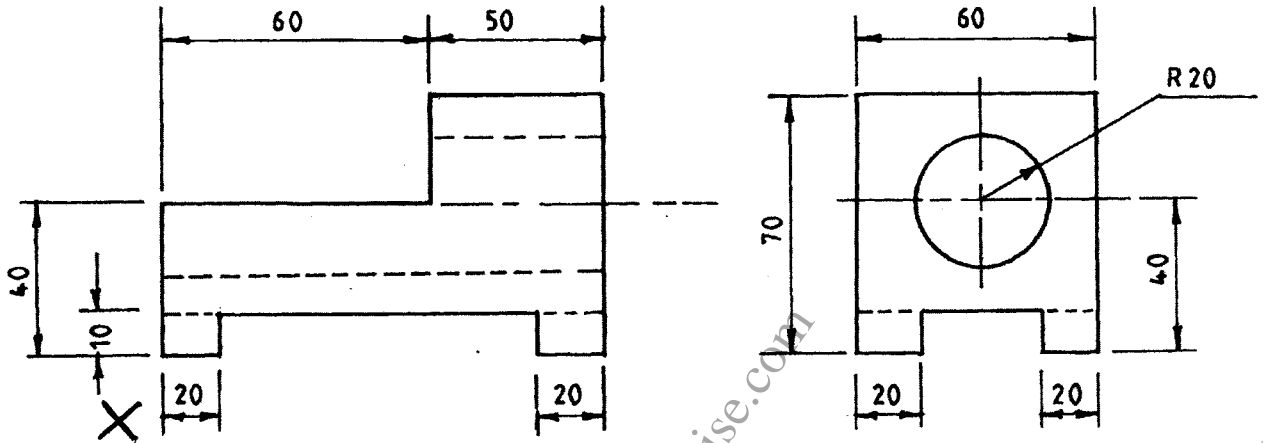


Fig. 4

6. Sketch the following:
- (a) a crane hook. (5 marks)
 - (b) open ended spanner. (5 marks)
 - (c) a stud. (5 marks)

7. Figure 5 shows a pictorial view of a lifting eye. Draw full size the eye in isometric projection. (15 marks)

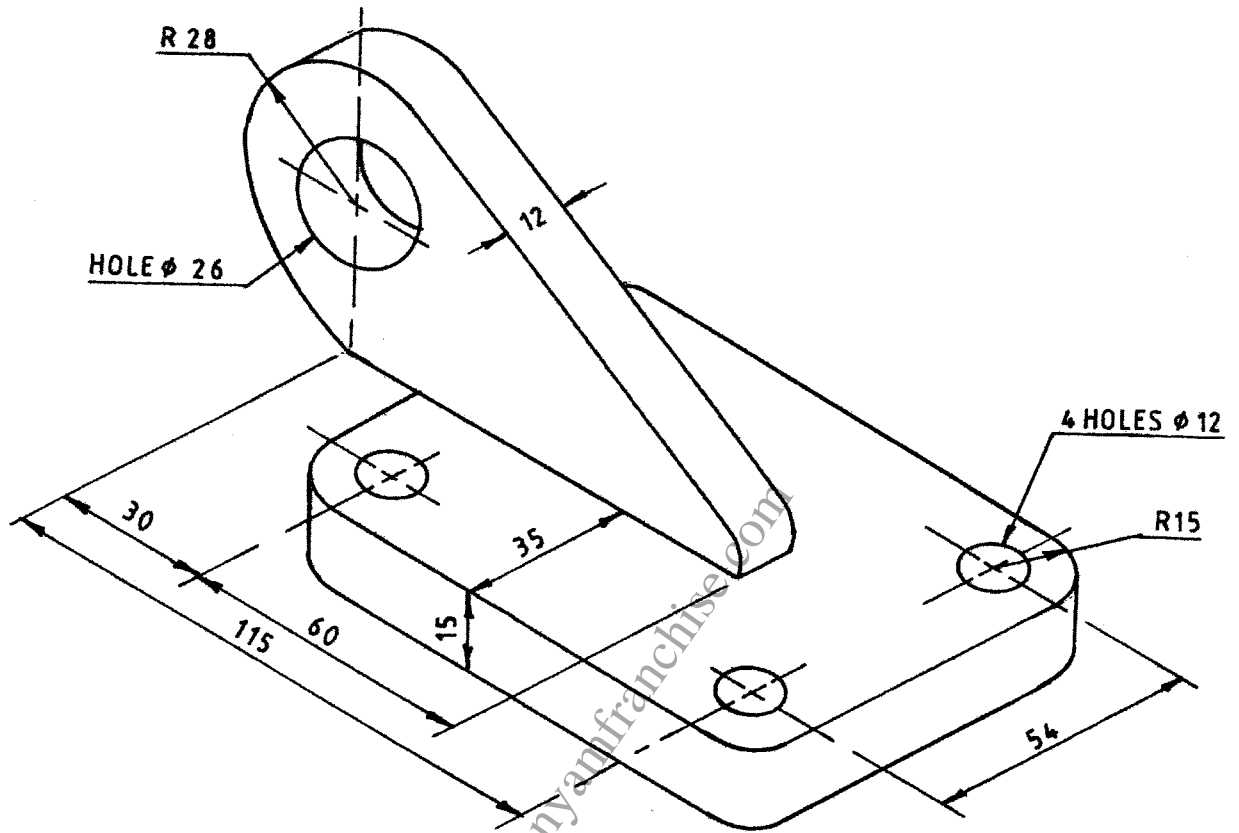


Fig. 5

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