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ARCHITECTURAL COMMUNICATION
AND TECHNICAL DRAWING
June/July 2020
Time: 3 hours

THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN ARCHITECTURE

MODULE I

ARCHITECTURAL COMMUNICATION AND TECHNICAL DRAWING

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:
> *Drawing paper size A2;*
> *Drawing Instruments;*
> *Scientific calculator.*
This paper consists of EIGHT questions in TWO sections: A and B.
Answer FIVE questions; choosing THREE questions from section A, and TWO questions from section B in the answer booklet provided.
All questions carry equal marks.
Maximum marks for each part of a question are as indicated.
All dimensions are in millimeters.
Candidates should answer the questions in English.

This paper consists of 12 printed pages.

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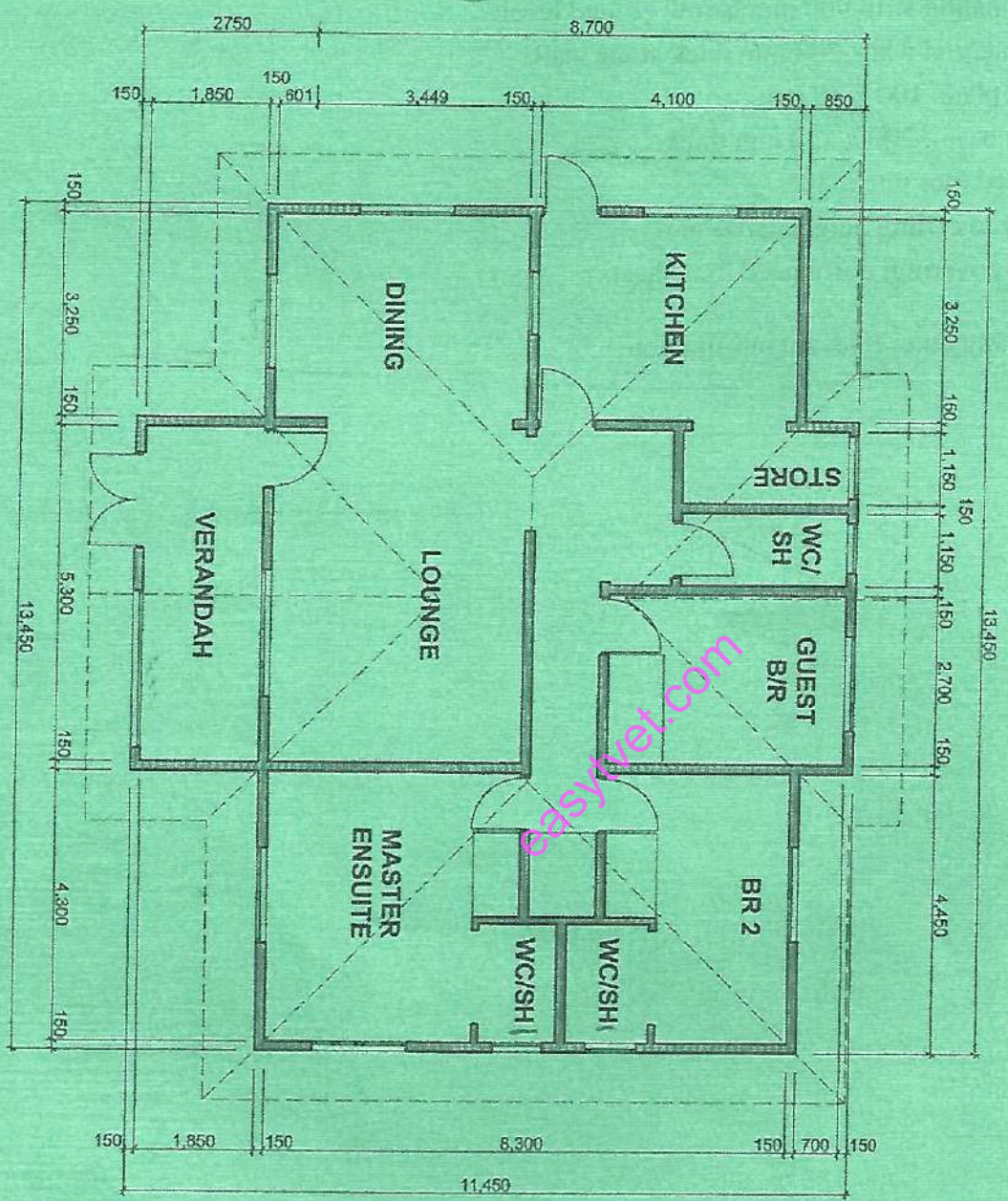
Turn over

SECTION A : ARCHITECTURAL COMMUNICATION

*Answer any **THREE** questions from this section.*

1. **Figure 1** shows the plan of a house. Taking the height of walls as 2700 mm; draw to a scale of 1:100:

   (a) elevation 01;   (10 marks)

   (b) elevation 04.   (10 marks)

All dimensions in mm

Fig. 1

2. **Figure 2** shows a plan of a house. To a scale of 1:20 draw section x-x given the following information:

Foundation strip 900 mm below ground level.

Foundation walls 200 mm thick stone wall.

Wall plate: 100 x 50 mm.
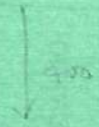
Ring beam: 200 x 150 mm thick.

Gabled roof pitch; 30°.

Floor to ceiling height: 2700 mm.

Roof covering; corrugated iron sheets.

Assume any other relevant information.

(20 marks)

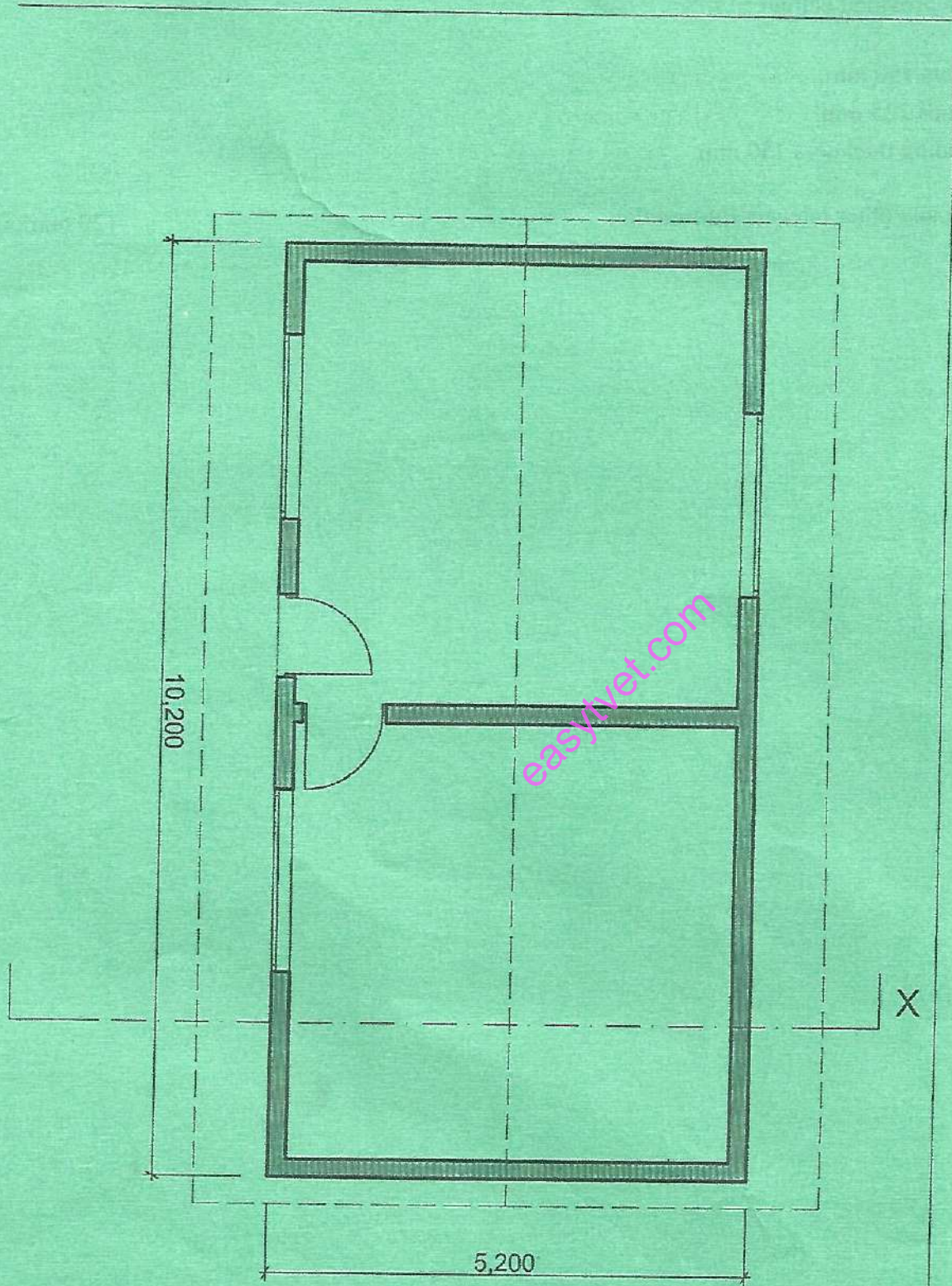10,200

5,200

X

easyivet.com

Fig. 2

3. **Figure 3** shows a two landings staircase. To a scale of 1:20, draw a section through A-A using the data provided below:

Risers 150 mm.

Treads 225 mm.

Landing thickness 150 mm.

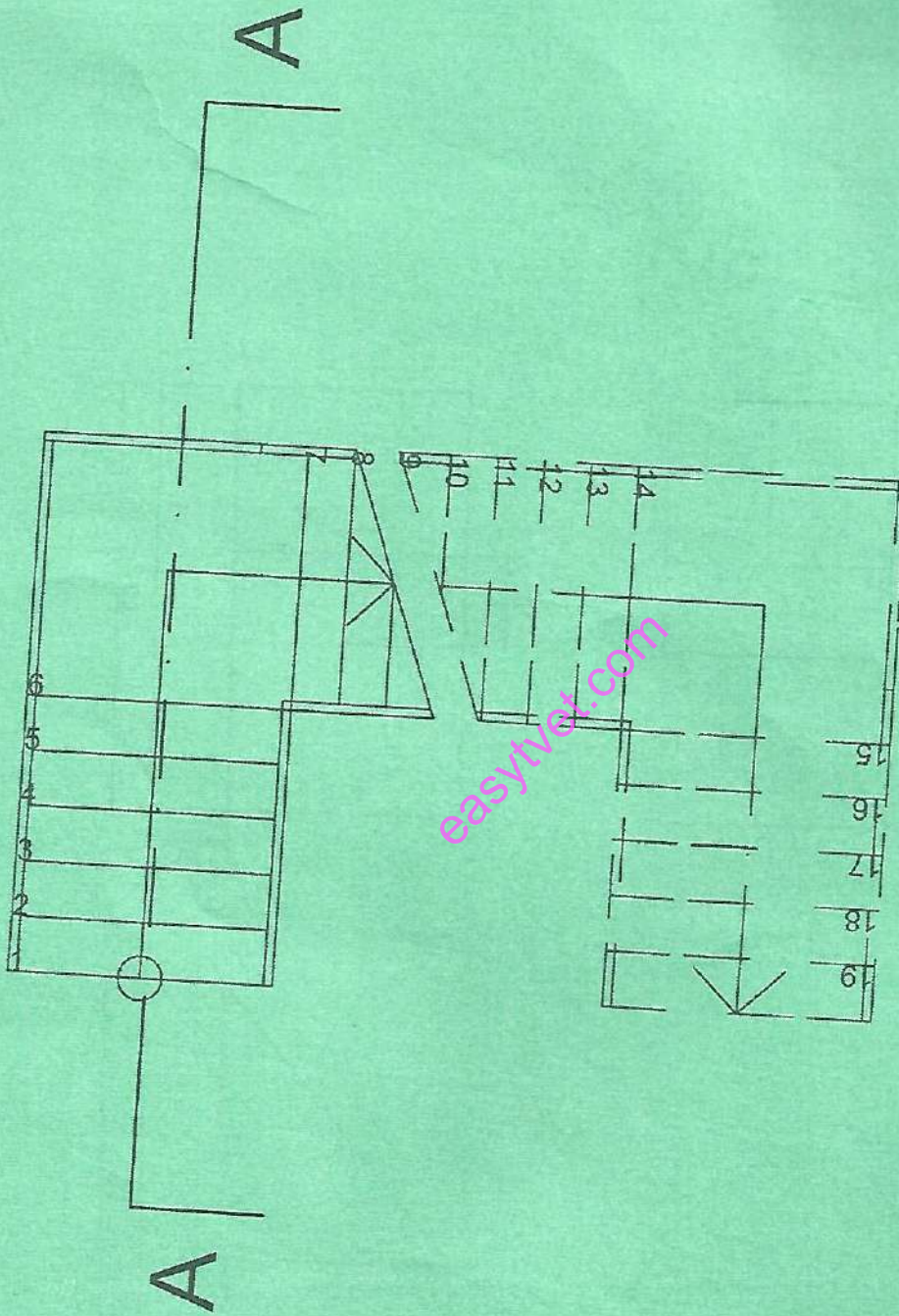Assume any other relevant information.

(20 marks)

Fig. 3

4. **Figure 4** shows a third angle orthographic views of an object. Draw the object using two point perspective taking point x as the lowest point. Assume any other relevant information.
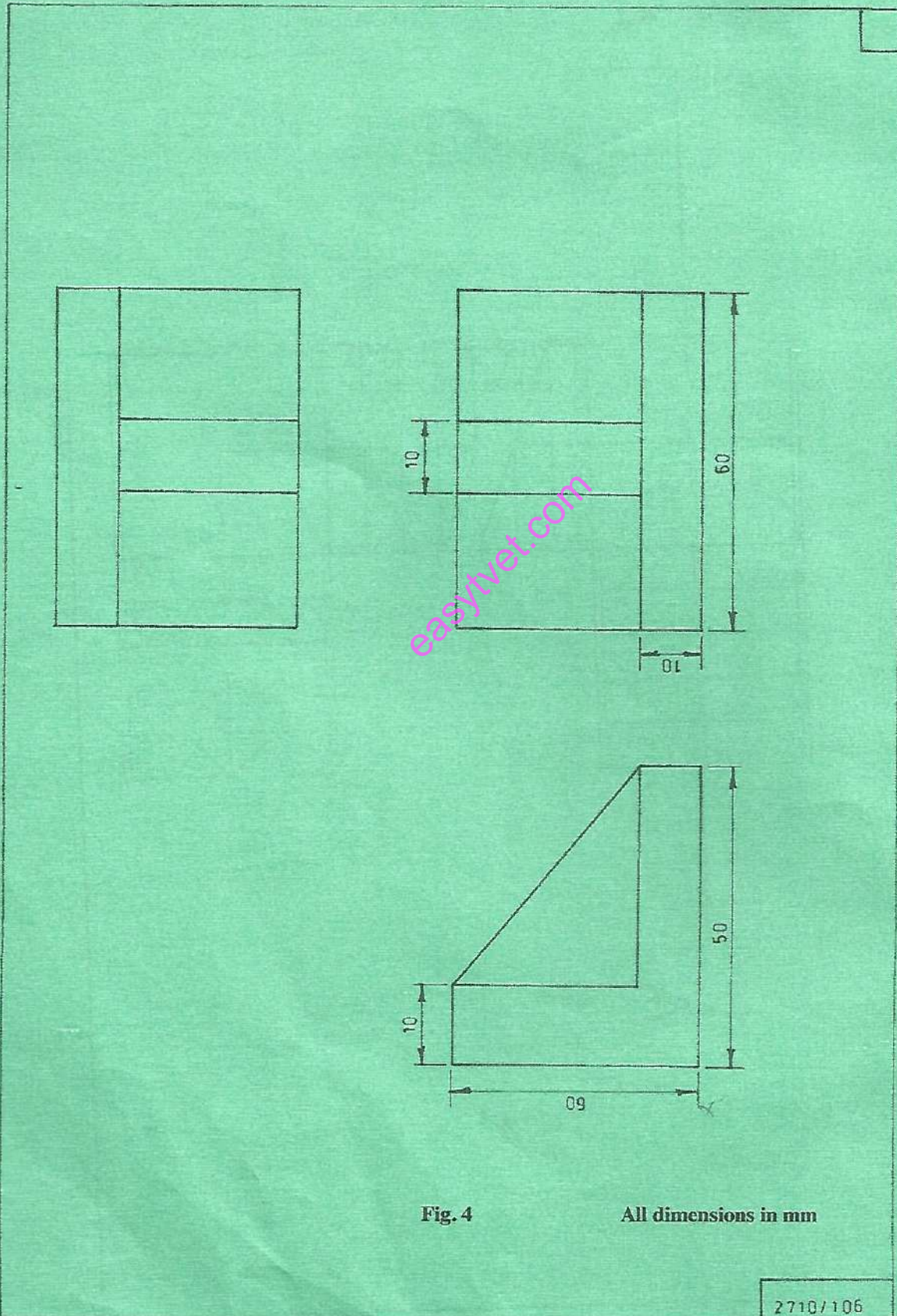
(20 marks

Fig. 4   All dimensions in mm

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5.   Draw a section to a scale of 1:20 showing the following construction details of an external masonry wall of a building:

Concrete strip foundation	- 600 x 200 mm
Concrete ground floor	- 100 mm thick
Masonry wall	- 200 mm thick
Concrete flat roof	- 150 mm thick
recast concrete coping	- 300 x 50 mm

(20 marks)

SECTION B : TECHNICAL DRAWING

*Answer **TWO** questions from this section.*

6.   (a)   Draw an Archiemedean spiral with its nearest point 20 mm from the centre and furthest point 80 mm from the centre.   (12 marks)

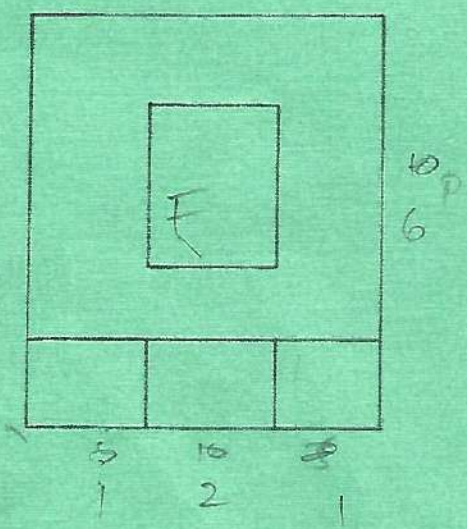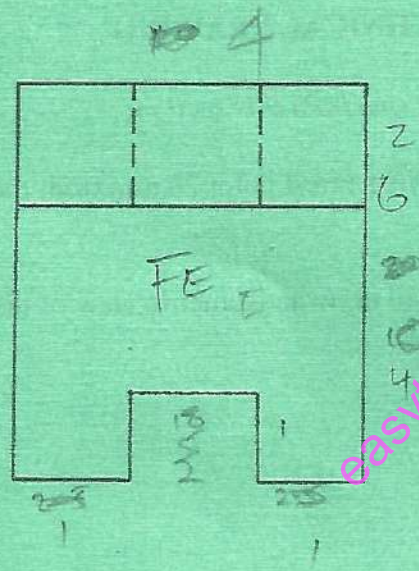(b)   Using a free hand sketch **figure 5** and draw an isometric view of the object.   (8 marks)

Fig. 5

7. **Figure 6** shows the elevation of a right hexagonal pyramid of a base edges 30 mm and vertical height 70 mm, draw the:

    (a)   given view;   (3 marks)

    (b)   plan;   (5 marks)

    (c)   true shape of the cut surface;   (5 marks)

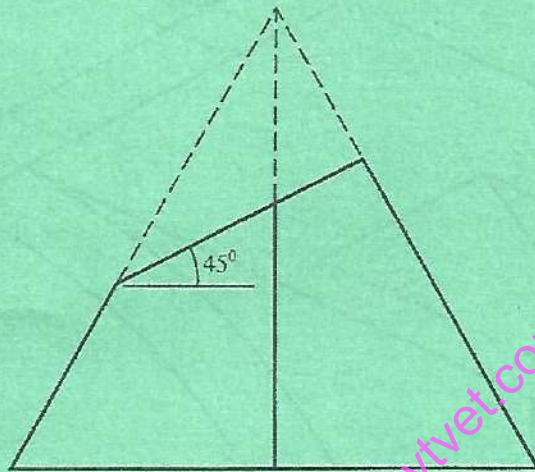   (d)   surface development of the truncated pyramid.   (7 marks)

Fig. 6

8. **Figure 7** shows the isometric view of a block. Draw to a scale of 1:1 the stated views in first angle projection:

    (i)   front elevation;
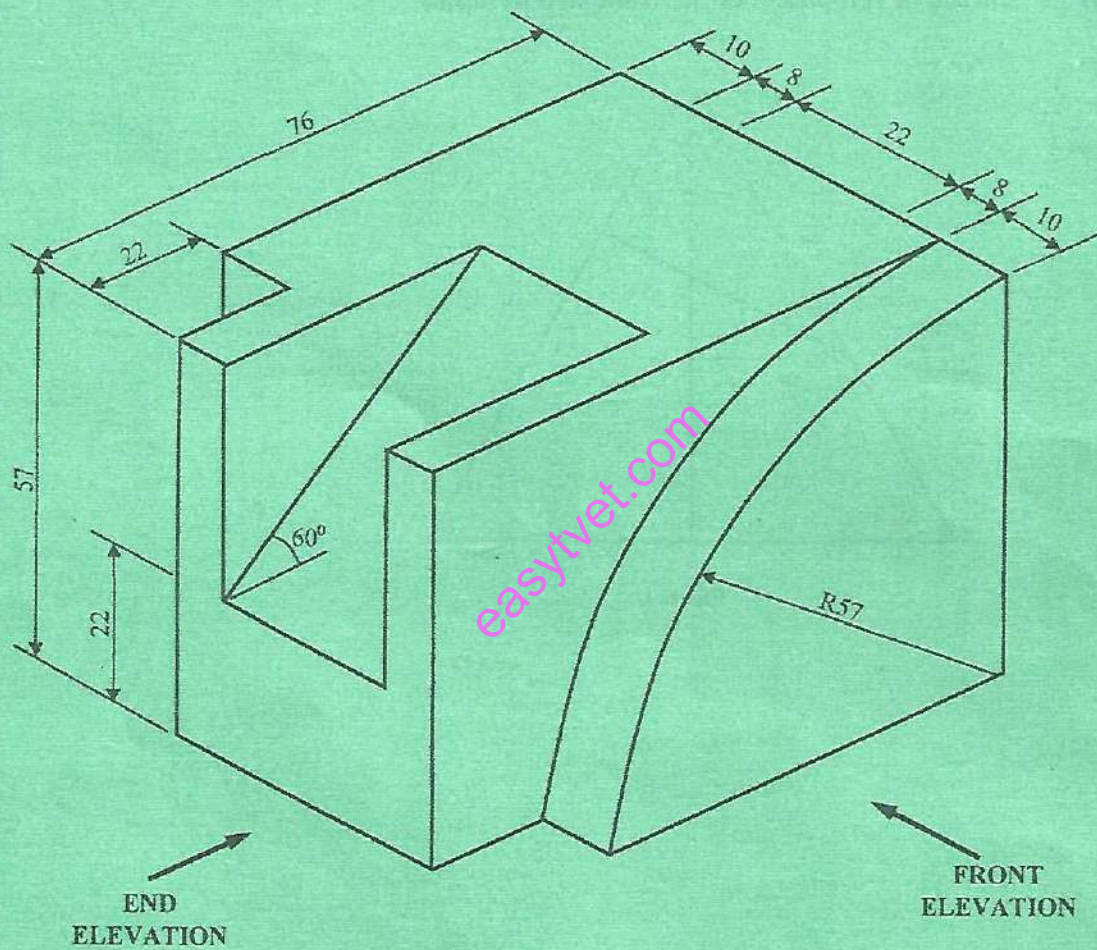
    (ii)   end elevation;

    (iii)   plan.

(20 marks)

Fig. 7

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