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:
 Answer booklet;
 Drawing paper size A2;
 Drawing instruments;
 Scientific calculator;
*This paper consists of **EIGHT** questions in **TWO** sections; A and B.*
*Answer any **FIVE** questions choosing **THREE** questions from section A and **TWO** questions from section **B**.*
All questions carry equal marks.
Maximum marks for each part of a question are indicated.
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.

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SECTION A: ARCHITECTURAL COMMUNICATION

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

1. (a) State **two** uses for each of the following drawing instruments:

    (i)   T-square;
    (ii) compass;
    (iii) drawing board;

    (6 marks)

    (b) Describe **three** categories of pencils giving examples in each case. (9 marks)

    (c) Illustrate the relationship of 'A' series paper sizes from A_0 to A_4. (5 marks)

2. (a) Explain the following principles of visual art:

    (i)   contrast;
    (ii) rhythm;
    (iii) harmony;
    (iv) movement.

    (12 marks)

    (b) Describe each of the following types of architectural models:

    (i)   site models;
    (ii) form models;
    (iii) scheme models;
    (iv) detail models.

    (8 marks)

3. Using **drawing No. 1**, draw and render elevation 1 to a scale of 1:50. (20 marks)

4. Using **drawing No. 1**, draw and dimension the foundation layout plan to a scale of 1:100.

    (20 marks)

5. Using the following information, draw and label an eave detail to a scale of 1:20.

    Data

    GCI sheets
    100 x 50 mm rafters
    100 x 50 mm purlins
    100 x 50 mm wall plate
    100 x 50 mm struts
    100 x 50 mm tie beam
    200 x 25 mm fascia board
    100 x 25 mm T and G timber

    50 mm x 50 mm Ceiling joists
    200 mm thick masonry walling
    300 x 200 mm ring beam
    Pitch angle of 30°

                                                                                                (20 marks)

SECTION B: TECHNICAL DRAWING

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

6. (a)   Given that a regular heptagon has sides of 35 mm, draw the required heptagon using
          45° and 60° angles.   (8 marks)

    (b)   Given that the major and minor diameters are 120 mm and 70 mm respectively,
          construct an ellipse using foci method.   (12 marks)

7. Using **figure 1**, project the following views in first angle to a scale of 1:1:

    (a)   front view from A;
    (b)   side view from B;
    (c)   plan.

                                                                                                (20 marks)

8. Using **figure 2**:

    (a)   complete the plan;
    (b)   draw the true shape of the truncate face;
    (c)   draw the surface development of the truncated hexagonal pyramid of sides 30 mm.

                                                                                                (20 marks)
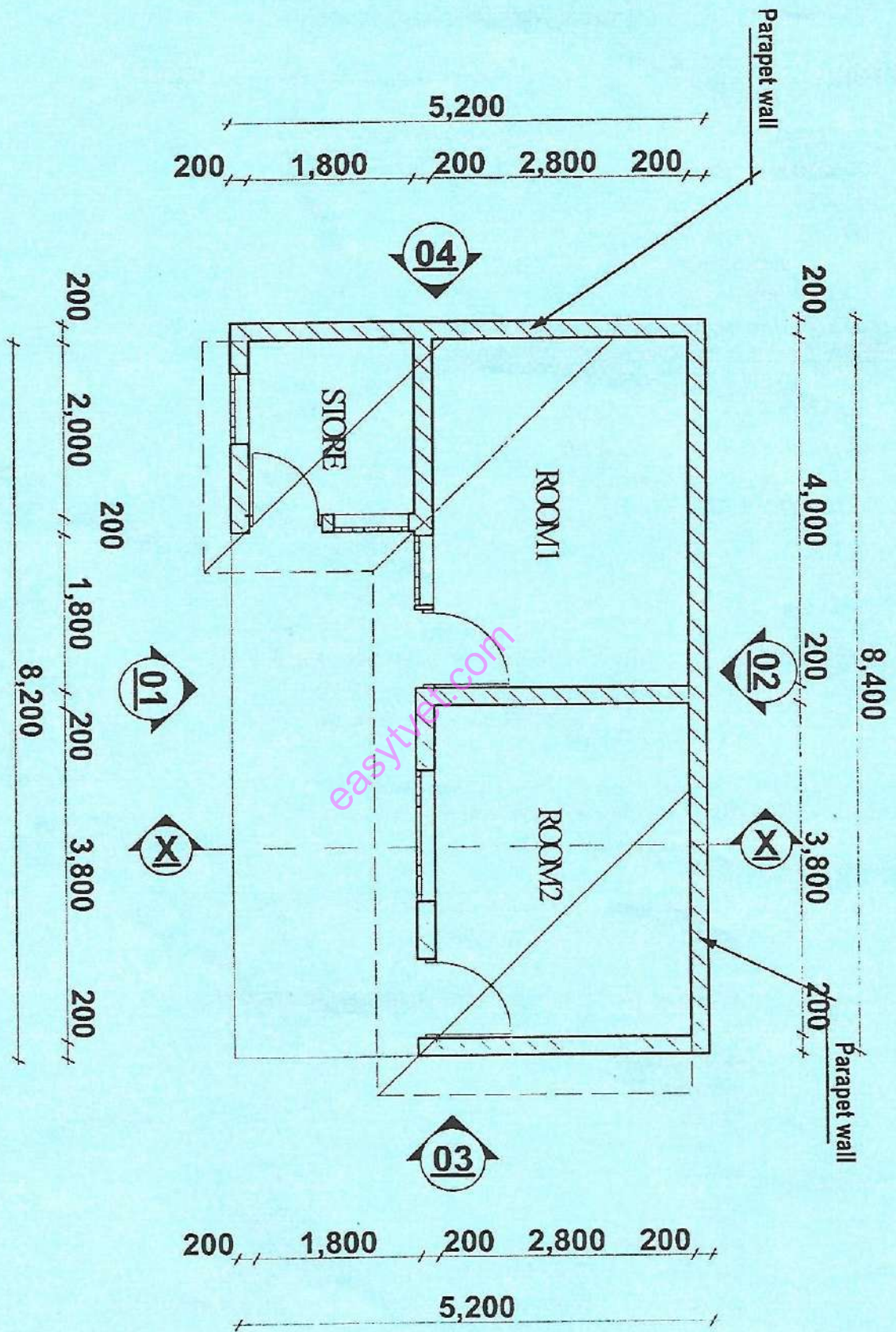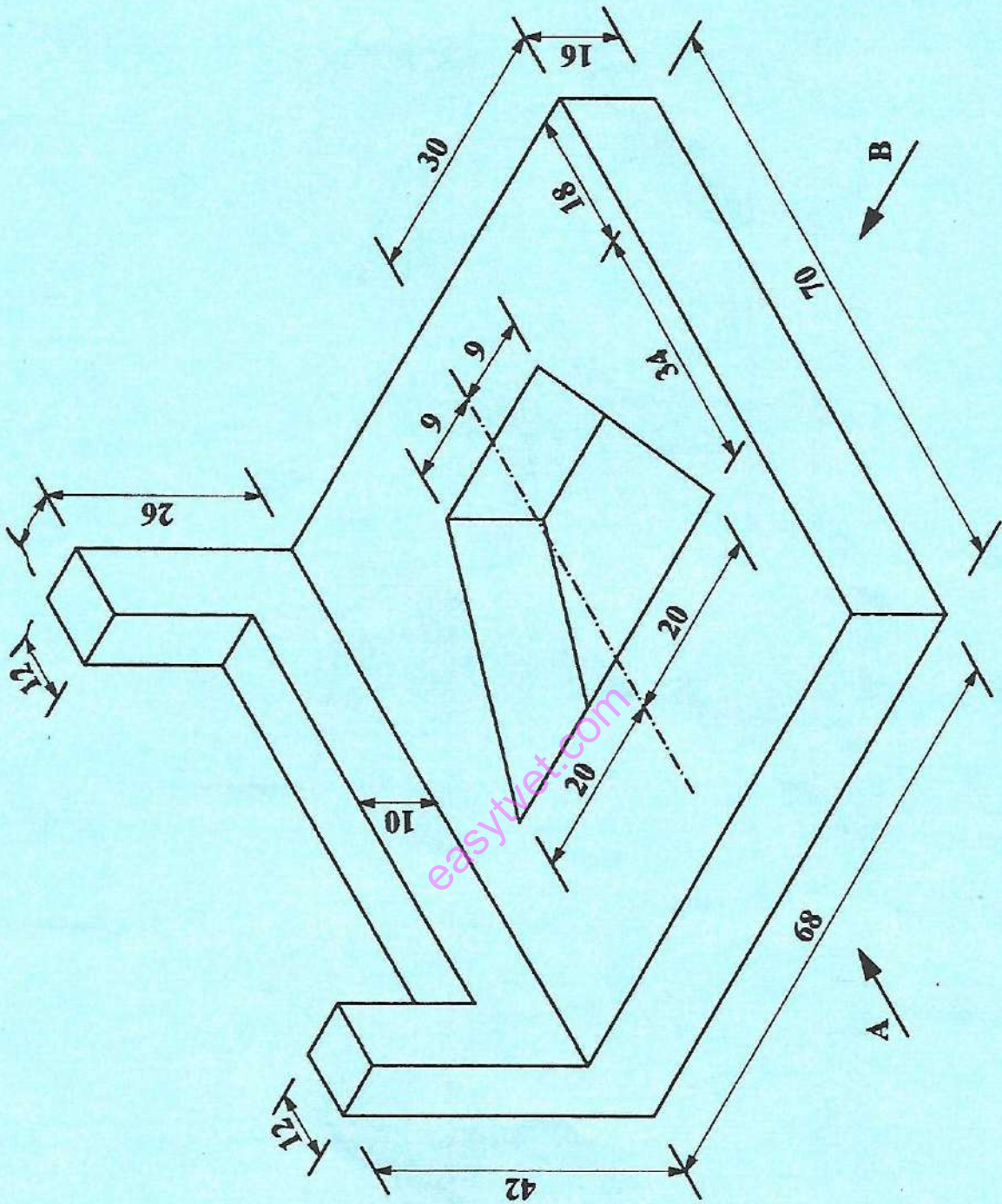
Drawing No. 1

NOTE:
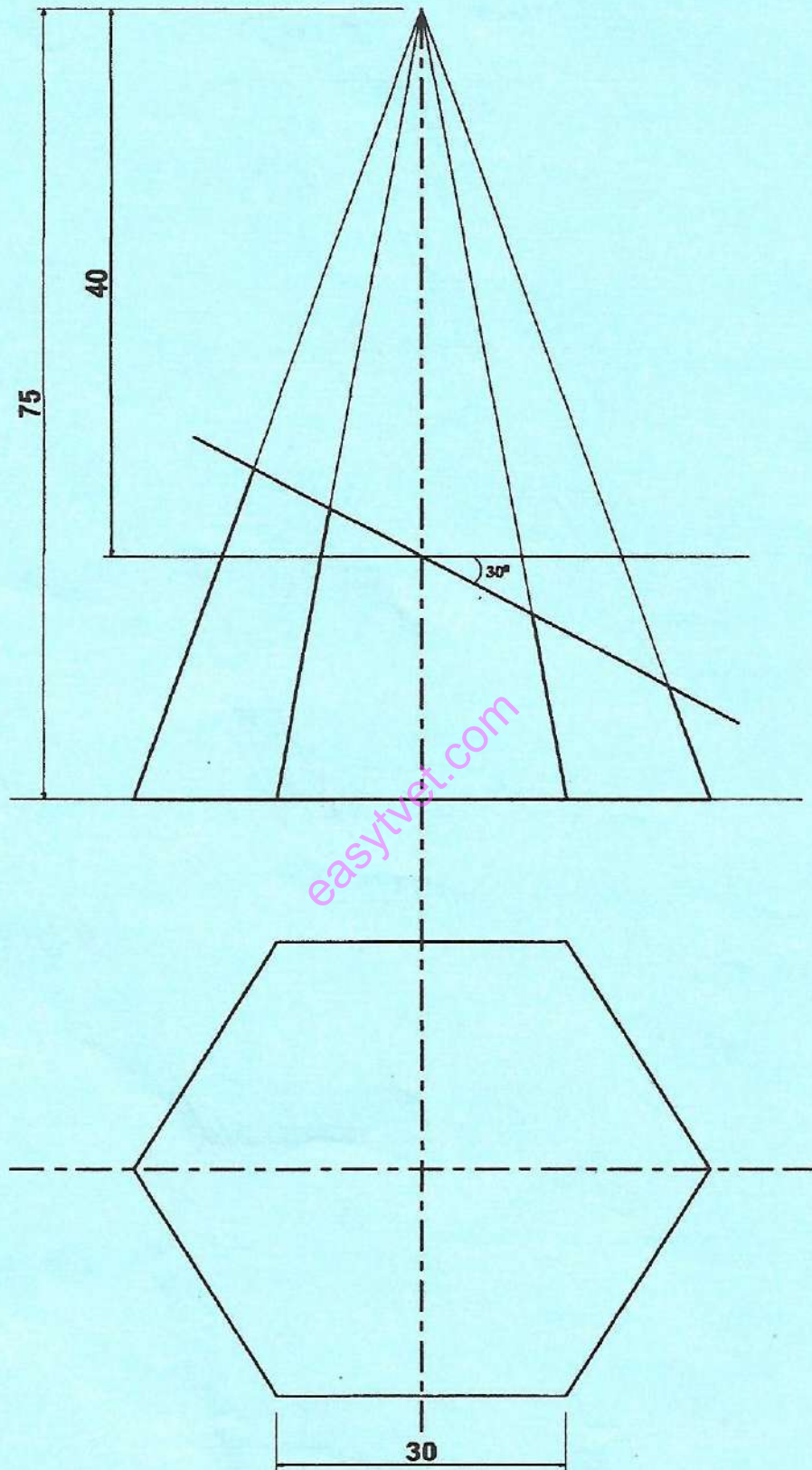Assume any relevant information not provided.

Fig. 1

NOTE:
Assume any relevant information not provided.

Fig. 2

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