



ZIMBABWE

**MINISTRY OF HIGHER AND TERTIARY EDUCATION,
INNOVATION, SCIENCE AND TECHNOLOGY
DEVELOPMENT**

**HIGHER EDUCATION EXAMINATIONS COUNCIL
(HEXCO)**

NATIONAL CERTIFICATE

IN

**CIVIL ENGINEERING / WATER RESOURCES AND IRRIGATION
ENGINEERING / QUANTITY SURVEYING / VALUATION AND ESTATE
MANAGEMENT**

SUBJECT: Civil Engineering Drawing

PAPER NO: 313/18/S08

DURATION: 4 Hours

MARCH/APRIL 2023 EXAMINATION

REQUIREMENTS

Drawing Equipment

INSTRUCTIONS TO CANDIDATE

- 1. Section A – Answer all questions.**
- 2. Section B – Answer any five questions.**
- 3. Each question in Section B carries 10 marks.**

This paper consists of 5 printed pages.

SECTION A

QUESTION 1

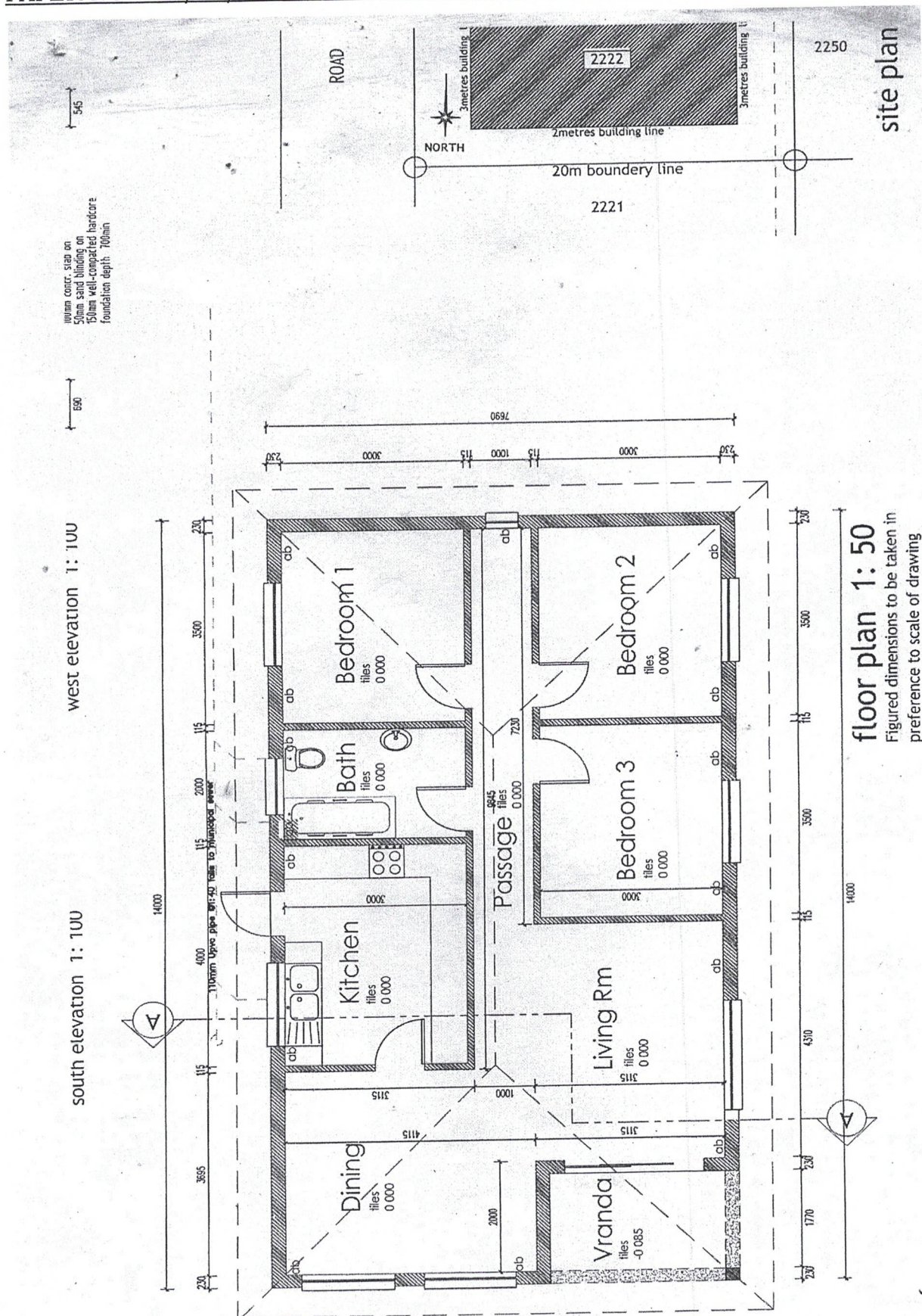
Reproduce the floor plan in Fig 1.

(50 marks)

SECTION B

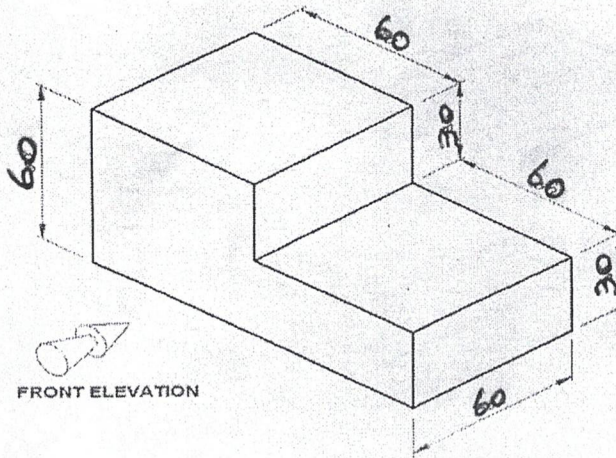
QUESTION 2

- a) ^{draw} Inscribe an equilateral triangle in a circle. The sides of the triangle dimension is 70mm. (5 marks)
- b) ^{draw} Inscribe a circle outside a square of dimensions 60mm. (5 marks)



QUESTION 3

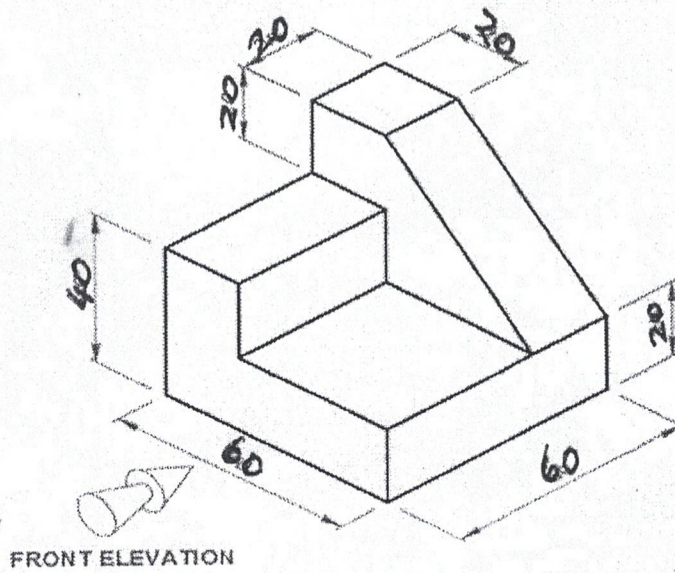
Produce in Oblique Projection.



(10 marks)

QUESTION 4

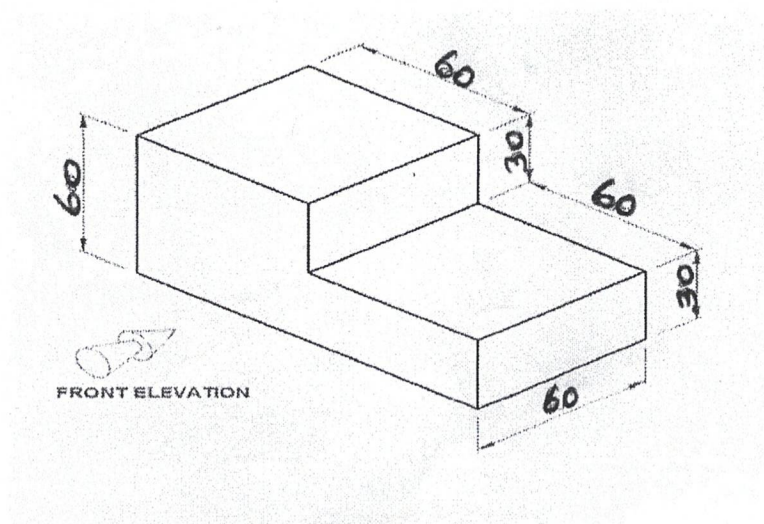
Reproduce in Isometric Projection.



(10 marks)

QUESTION 5

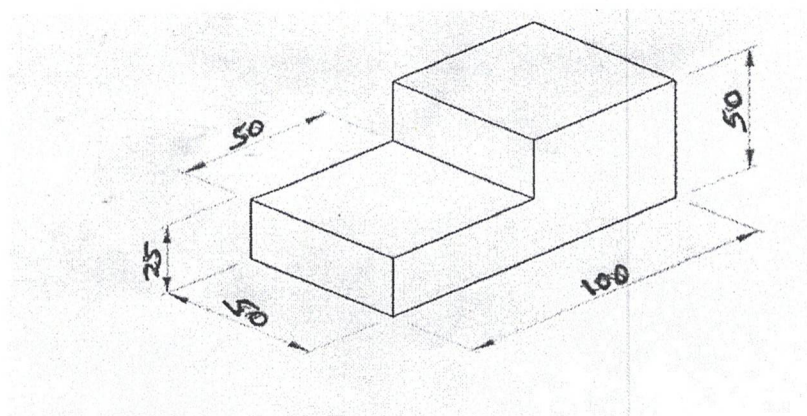
Produce Third Angle Projection



(10 marks)

QUESTION 6

Produce First Angle Projection.



(10 marks)

QUESTION 7

Neatly show the first and third angle projection symbols.

(10 marks)

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