



AITEL EXAMINATIONS BUREAU LIMITED

UGANDA CERTIFICATE OF LOWER SECONDARY CURRICULUM

END OF YEAR 2023

S.3 MATHEMATICS

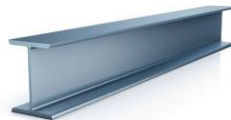
1 Hour 30 Minutes

INSTRUCTIONS:

- Attempt all questions in this paper.
- Use only the spaces provided to answer the questions.

1. Work out $\frac{3\,000\,000}{4\,740\,000\,000\,000}$ giving your answer in the form $a \times 10^n$ where n is an integer and $0 \leq a < 10$. Give your answer correct to three significant figures.

(03 marks)



2. In designing a building, it was determined that forces acting on an I beam would deflect the beam by $\frac{x(1000-20x^2+x^3)}{185} \text{ cm}$, where x is the distance from one end of the beam. Find the deflection when $x = 0.0685 \text{ cm}$.

(04 marks)

3. In the space provided below, construct an angle of 75° .

(03 marks)

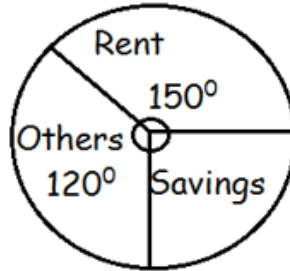
4. Solve the equation $2^n = 64$.

(03 marks)

5. The expression used with a lens in a certain telescope is $a(a + b) + a^3 - (a + b)(2a^2 - s^2)$. Simplify the expression.

(04 marks)

6. The pie chart below shows how Namusisi spends her monthly income of Shs.600000.



How much money does she save?

(04 marks)



7. The value of a car at the beginning of 2023 was Shs.37 500 000. The value decreases by 6% annually. What would be the value of the same car at the end of 2025?

(04 marks)

***** END *****