## First Term Examination 2015 Mathematics

Grade 08
ตકூธை
Time: 2 hours
Name/ Index No.

## Part I

## - Answer all questions on paper itself.

01 Write the next two terms of the number sequence
$-12,-15,-18,-21$, $\qquad$
$\qquad$

02 The price of a 1 m of a cloth is Rs. 235. Find the price of 6 m of cloth.


08 Simplify (-3) x (-2)

09 Write the following statement as a algebraic expression.
"Subtract 5y from 2x"
$0 \quad$ Write the digit suitable for the blank space of $16 \square$ to be a square number.

11 What is the supplementary angle of $104^{\circ}$ ?

12 Write these measurements in ascending order. $1.2 \mathrm{~kg}, 1000 \mathrm{~g}, 1.02 \mathrm{~kg}$

13 Fill in the blanks.
$4 \mathrm{x}-16=4$ $\square$
$\square$
14 Find the perimeter of quadrilateral ABCD .


15 Write odd numbers between 85 and 95 .

16 If $x=4$, find the value of the expression $6 x-2$

17 Fill in the blanks by Obtaining the formula regarding the relation between the number of edges, vertices and faces of solids

No. of faces + $\qquad$ $=$ $\qquad$ $+2$

18 Find the value of the angle a in the following diagram.


| 19 | Simplify. $\mathrm{x}^{7} \div \mathrm{x}^{4}$ |  |
| :--- | :--- | :--- |
| 20 | Name a pair of allied angles. |  |
|  |  |  |
|  | Part - II | $(2 \times 20=40)$ |

- Answer first question and four other questions. 16 marks in first question and $\mathbf{1 1}$ marks in each other four questions.

01 Remind the activities done at the classroom by studying the lesson perimeter.
(a) (i) Find the perimeters of the given plane figures.

(ii) Using the above shapes and find the perimeter of the composite figure.
(b) A length of a wire is 42 cm .

(i) How much is the length of a side of an equilateral triangle made by it.
(ii) How much is the length of a rectangle of breadth 8 cm made by it.
(c) Consider the following figure
(i) Build up an expression to find the perimeter.
(ii) If the perimeter is 70 cm find the value of x .
(a) (i) Write the following numbers as a product of prime numbers. 32,200

(ii) Find the square root of $\sqrt{32 \times 200}$
(b) The weight of an apartment of train is 70 t . Some goods of 25 t 500 kg was loaded to it.
(i) Find the total weight of the apartment.

The two workers of weights 65 kg and 85 kg were also got in to that.
(ii) Find the total weight of apartment now.
(c) If $a=-1, \mathrm{~b}=3, \mathrm{c}=2$ find the value of the expression $2 a-3 \mathrm{~b}-2 \mathrm{c}$

The figure shows a solid with an equilateral triangular base.
(i) Write the name of this solid.
(ii) When two such solids were fixed together using the rectangular surface. What is the
(a) Number of surfaces of the new solid.

(b) Number of edges of the new solid.
(c) Number of vertices of the new solid.
(d) Is the relation between the number of surfaces, edges and vertices of this solid satisfy the Euler's relation?
(a) AB and CD are straight lines.
(i) Name a pair of opposite angles.
(ii) Name the supplementary angle of AÔC
(iii) Find the value of $x$ according to the given figure.

(b) Calculate the values of angles indicated by algebraic symbols in the figure.

(a) Subtract the given directed numbers using the numbered line. (+5)-(-2)
(b) Simplify. $\frac{(-3) \times 5 \times(-6)}{(-2)}$
(c) Find the value using the knowledge of indices.
(i) $\frac{x^{3} \times x^{6}}{x^{5} \times x}$
(ii) $\left(\mathrm{a}^{2}\right)^{4} \div\left(\mathrm{a}^{3}\right)^{2}$

07 The following figure shows a piece of land is divided in to 6 pieces. The breadth of each of the pieces equals to " $x$ " and the lengths equals to "a", "b" and "c".

(a) (i) Find the total length of the land in terms of $a, b$ and $c$.
(ii) Find the total breadth of the land in terms of $x$.
(iii) Build up an expression with brackets for the perimeter of the land.
(iv) Build up an expression with brackets for the area of the land.
(b) Remove the brackets of the following expression and simplify.

$$
3(x+2 y)-2(y+x)
$$

