Jaffna Hindu College

1st Term Evaluation Exam - 2022

Grade - 08	Mathematics	time : 2 hours

Name/ Index No: .....

Part - I

Answer all the questions.

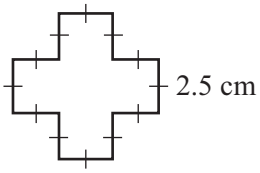
01. 11, 14, 17, ..., ... wrote the next two terms of the series.

02. Write a pair of complementary angles in $S\hat{T}U = 52^0$, $A\hat{B}C = 42^0$, $L\hat{M}N = 58^0$ and $P\hat{Q}R = 48^0$

.....

03. Find the value $(-12) - (-18)$

04. Find the perimeter.



05. Solve by removing the brackets. $7x - x(5 - 3y)$

06. Simplify. $5\frac{1}{7} + 3\frac{6}{7}$

07. Find the H.C.F of. $8x, 12xy$ and $20xyz$

08. Give 3.04 t in kg.

09. Solve $2x - 3 = 11$

10. Express $4x^2y^2$ as power of product.

11. Find the value. $\sqrt{121} - \sqrt{81}$

12. Write two platonic Solids.

13. If $3 \times 7 \times 11 = 231$ find which triangular number is 231.

14. Find the value. $(-1)^{2022} - (-1)^{2021}$

15. If P = {Letters in the word "CANADA"} write the element of P.

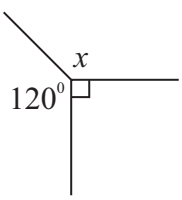
16. Simplify $50 - 0.12 \times 10$.

17. Perimeter of a square is 5a units. write the algebraic expression for the length of a side of the square.

18. Find the value $2^3 \times 3^2$

19. If a regular solid has 6 vertices and 12 edges what is the name of that solid?

20. Find the angle of x.



(20x2 = 20 Marks)

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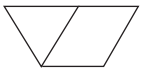
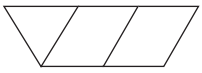
Part - II

❖ **Answer five questions only.**

01. a. The following patterns are made by sticks.

1)  2)  3) 

i. Find the number of sticks in the each patterns.

ii. Find the general term using the above numbers of stickes as a number pattern.

iii. How many sticks are needed construct the 12th Pattern.

iv. Which pattern is made by using 105 Sticks.

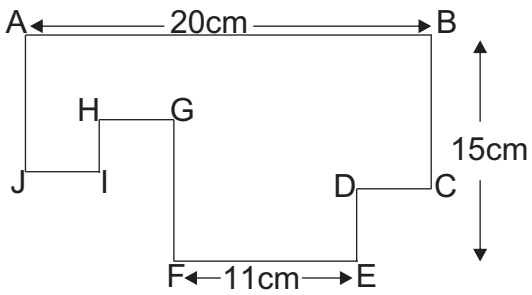
b. Find the value.

i. (-18) - (-25) + (-17)

ii. $\frac{(-12) \times (+20) \times (+18)}{(-15)\ (+36)}$

(2+2+2+2+2+2=12 Marks)

02. a. Answer the following questions by using the given figwre.



i. If AJ = GF = 9cm, Find the length of HI.

ii. Find the perimeter of the above figure.

b. Which square number is the sum of $1+3+5+.....+45+45$.

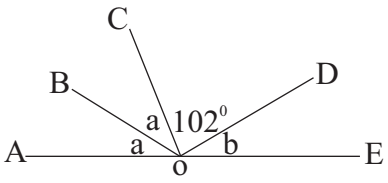
c. Find the Value.

i. $\sqrt{3 \times 3 \times 5 \times 5}$

ii. $\sqrt{324}$

(2+4+2+2+2=12 Marks)

03. a. AE is a straight line in the given figure.

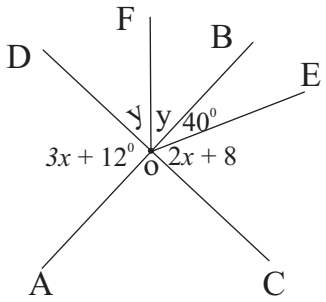


i. What is the supplement of $A\hat{O}C$.

ii. If $a+b=50^0$, Find the value $A\hat{O}B$.

iii. Find the value of $D\hat{O}E$.

b. The straights lines AB and CD are intersect at point O.



i. Find the angle of x.

ii. Find the angle of y.

iii. Find the magnitude of $A\hat{O}C$

(2+2+2+2+2+2=12 Marks)

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04. a. Construct a cube and two square pyramids such that the area of the base of square pyramid and area of a face of cube are equal. Construct a composite solid by pasting square pyramids on opposite faces of the cube. Find the number of vertices, faces and edges for the composite solid.

b. In a regular dodecahedron.

i. What is the shape of a face.

ii. Verify Euler's relationship for this solid.

b. Factorize.

i. $x^2 + x$ ii. $4m^2n - 6mn^2 + 10mn$

(3+2+4+1+2=12 Marks)

05. a. given information shows in the notice board of a shop.

Things	Mass	Price (Rs)
Flour	1 kg	a
Sugar	500 g	b
Dhal	1 kg	c
Peanut	250 kg	d

Write an algebraic expression for the followings.

i. The price of 1 kg of flour and 1 kg of sugar.

ii. The price of ½ kg of sugar and ½ kg of dhal.

iii. A person gave Rs. 1000.00 to the shop keeper to buy 200g of sugar and 200g of peanut find the balance he received.

b. Solve by removing the brackets.

i. $3(5a-2)-14$

ii. $5m(m+2)-3m(m-3)$

c. If $x=2, y=-1$ and $z=5$ Find the value of $4xy^2z^3$

(2+2+2+2+2=12 Marks)

06. a. i. Write 900 as the product of prime number.

ii. Write 900 as the product of powers of the prime number.

iii. write question (ii) as powers of product.

b. Simplify.

i. 12 t 782 kg + 20 t 537 kg

ii. 8t 75 kg x 12

iii. 15 t 21 kg ÷ 9

(2+2+2+2+2+2=12 Marks)

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