

Negombo Educational Zone Second Term Evaluation – 2022 Mathematics

Index No:				
Grade 9	Paper I&II	Time: 02 hours		
 Answer all the questions f Each question carries 2 ms 	Part I from 1 to 20 on this paper itself. arks.			
01. The general term of a number pattern.	per pattern is $T_n = 4n - 1$. Find the	e 12th term of this number		
02. 1001 _{two} , convert this bina	ary number to a decimal number.	(Base 10)		
03. A 10% discount is given on the sale of a refrigerator priced at Rs.36000.				
How much is the discount?				
04. That anga spent $\frac{1}{5}$ of the money which was given by her father for her birthday to buy a book.				
3	ve was Rs.4000, find the price of			
05. Find the value using laws of	Findices $\frac{2^3 \times 2^2}{2^0}$			

06.Fill in the table

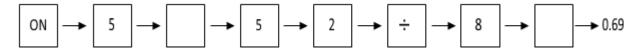
Number	Scientific Notation
(i)	2.5 x 10 ³
(ii) 0.32	

07. Write the suitable value for the box. $7: \Box = 56: 24$

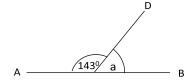
08. Find the value of X.



09. The following shows how mohomed pressed the keys of a scientific calculate to obtain the value of $5 \cdot 52 \div 8$. Fill in the empty keys.



10. If AB is a straight line, find the magnitude of a.



- 11. When the certain number was rounded off to the nearest 10, the answer was 80. Find the minimum and the maximum value that can be taken for the number.
 - i. Minimum value
 - ii. Maximum value
- 12. Make 'a' the Subject of the formula V = U + at.
- 13. The figure shows a cuboid shaped glass tank. Find the volume of water contains in this tank in milliliters if it is completely filled with water mathematica.lk
- 14. A circular iron ring has a diameter of 14cm. Calculate its circumference. $(\pi = \frac{22}{7})$
- 15. Solve 2x 1 = 5

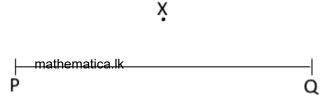
16.. If p = (-2) and $q = \frac{1}{2}$, find the value of 3p + 2q.

17.y = -2x + 1 is the equation of a linear graph. Find the,

i. gradient

ii. intercept

18.In the given figure, construct a perpendicular to the line segment PQ from X.



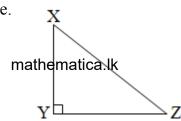
19. Find the value by using the knowledge of factors.

 $98^2 - 4$

20. If AB = 8cm and PQ = 8cm, write the conclusion that you can arrive.

Part II

- Answer the first question and four more questions.
- The first question carries 16 marks and the remaining questions carry 11 marks for each.
- 1) a)
- i. How many basic loci did you learn in the lesson "loci and constructions."?
 - ii. Draw a sketch and describe one of them.
 - iii. Draw a straight line and name it as PQ. Draw the locus of the points travelling 3cm equidistant to PQ.
 - b) Using a straight edge and a pair of compasses.
- i. Construct a straight line segment AB which is 5cm in length.
- ii. Construct an angle of 60° at B such that AB becomes one arm and name it as ABC.
- iii. Construct the locus of points travelling equidistance to AB and BC in part (ii) (c)
- i. Write down the Pythagoras relationship for this right triangle.



ii. If XY = 8cm and YZ = 6cm, find the length of XZ.

i) Factorize,
$$p^2 - p - 20$$

ii) Solve
$$\frac{3x}{2} - 1 = 2$$
.

iii) Solve
$$n + 2m = 7$$

 $n - m = 1$

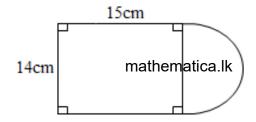
3)

- a) If a factory which produces 180 light bulbs in 6 minutes, find the number of bulbs produced in 10 minutes using proportions.
- b) Mr. Kumar buys a house worth Rs.7500000. He decides to sell the house for Rs.8500000 due to a sudden leave from the country through a broker. he decides to give 3% commission to the broker.
 - i) What is the brokerage fee (commission) given?
 - ii) How much will Mr. Kumar receive after paying the brokerage fees?
- c) A tourist who came to Sri Lanka, transferred his 150 dollars to Sri Lankan rupees when the price of one dollar was Rs.350. How much Sri Lankan Rupees did he get?
- 4) Y = 2x + 1 fill the table for draw the graph of the function

X	2x + 1	у
-3	$2 \times (-3) + 1$	-5
-2		
-1	$2 \times (-1) + 1$	-1
0	$2 \times (0) + 1$	1
1	$2 \times (1) + 1$	3 ematica.lk
2		••••
3	$2 \times (3) + 1$	7

- i) Draw the graph for the above function.
- ii) Write the equation of the linear graph passing through (0,-1) and parallel to the above graph.
- iii) Draw the line y = 3, in the same coordinate plane.

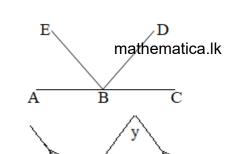
- a) Simplify. $\frac{2}{3} \times (\frac{4}{5} + \frac{1}{2})$
- b) The circumference of a circle is 44cm. Find the radius of the circle.
- c) This figure consists of a rectangular portion and a semi circle.



- i) What is the radius of the semi circular portion?
- ii) Find the arc length of the semi circular portion.
- iii) Find the perimeter of the composite figure.

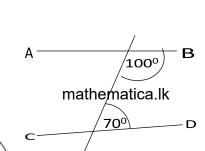
06)

a. In the figure given below, ABC is a straight line. If $A\hat{B}D = E\hat{B}C$ show that $A\hat{B}E = C\hat{B}D$ by using Axioms.



b)

- i) Find the values of the angles x and y.
- ii) Are the 2 straight lines AB and CD parallel? Give reasons.



- c. According to the information given in this figure,
 - i) find the value of x.
 - ii) find the value of y.

_	=	
11	7	1
v	1	,
_	•	,

a) Fill in the blanks.

- i. $5cm^3 = \dots ml$
- ii. $1.5m^3 = \dots$
- b) The length, width and the height of a water tank in a house are 1.5 m, 1 m and 1 m respectively.
 - i. What is the volume of the tank in cubic meters?
 - ii. What is the capacity of the tank in Litres?
 - iii. If a member of that family uses about 100ℓ of water per day, for how many days will the amount of water in this tank be enough for a home of five members?



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