யா/ ஹாட்லிக் கல்லூரி, பருத்தித்துறை.

J/ Hartley College, Point Pedro.

முதலாம் தவணைப் பரீட்சை – 2019 – தரம் 07

First Term Examination – 2019– Grade 07

கணிதம் I, II **Mathematics I, II**	**32**	**E**	**I, II**	இரண்டு மணித்தியாலம் **Two Hours**

சுட்டெண்
Index No | | | | | |

Mathematics

Part – I

Answer the all questions.

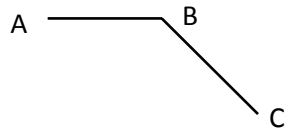
1. Price of 9 pencils is Rs. 67.50. Find the price of such 12 pencils.
2. How many symmetrical axes are in a kite?
3. A= {polygons with three or less than three sides}. Find the number of elements of set A
4. Simplify $10 - 6 \div 3$
5. 75□ is a smallest three digit number. Which is divisible by both three and two? Find the suitable number for the blank.
6. Write 65 as a product of prime factors.
7. Find the longest number which divides 34 and 51?
8. Find the L.C.M of 2, 3 and 5
9. Express $x \times x \times y^2 \times y$ in index form.
10. Find the decade to which year you joined to the Hartley College belong.
11. $E =$ {digits in 222900333}. Represent the set E in Venn diagram
12. Simplify

    $(-5) + (-3) + 2$
13. Name the arms of angle $A\hat{O}B$
14. If $x = 3$ find the value of $\frac{2x^3}{3}$
15. Draw the angle $P\hat{Q}R = 300^0$
16. Simplify $14.5 + 2.12$

17. Write 10000 as a power of base 10

18. Which is the first leap year belongs to 22^{nd} century

19. Find the H.C.F. of 12, 20, 32

20. 

Draw a parallel line to AB through C

$(\mathbf{20 \times 2 = 40\ Marks})$

Part – II

Answer any six questions.

01.

i. Simplify

a. $225 - 24 \times 50 + 10$

b. $100 \div 4 + (12 \div 3 \times 2)$

ii. A man had a land of 100 perches. He gave 20 perches to his daughter and from the remaining land. He gave 10 perches each per his 3 sons and the remainder was given to an orphanage.

a. Write expression for find the extent of land given to orphanage.

b. Calculate the extent of land given to the orphanage.

$(\mathbf{3 + 3 + 2 + 2})$

02.

i. Find the smallest number which is greater than 800 and divisible by 9 without any remainder.

ii. Write two odd factors of 90 between 5 and 90.

iii. Find the H.C.F. of 24, 64 and 56

iv. A new book shop opened recently, every 50^{th} customer is given a free exercise book and every 70^{th} customer is given a free school bag. Which customer will be getting the exercise and school bag for the first time?

$(\mathbf{2 + 2 + 3 + 3})$

03.

i. Write 500 as a product of prime numbers and express in index form.

ii. Write down the products $3 \times a \times b \times a \times b \times 3 \times a$ in index form.

iii. Write each of the given expressions in expanded form

a. a^2bc^3

b. $\frac{a^2}{b^2}$

iv. Find the value of each of the following expressions by substituting $a = 4$ and $b = 3$

a. $5a^2b$

b. $\frac{ab^3}{2}$

(2 + 1 + 1 + 1 + 2 + 3)

04.

i. Add the given

Years	Months	Days
12	9	26
7	10	10

ii. Subtract the given

Months	Days
8	17
4	28

iii. In a school a new science laboratory was opened on 24th of June last year for its 75th anniversary

a. When was the school built?

b. When will it be celebrating its century year?

(2 + 3 + +2 + 3)

05.

i. Add the given integers by using a number line

$(+6) + (-10)$

ii. Evaluate with and using the number line

a. $8 + (6) + 2$

b. $(-13) + 6$

c. $4.5 + (5.9) + (-6.3)$

d. $(-\frac{1}{2} + (-2)$

(2 + 2 + +2 + 2 + 2)

06.

i. Draw a straight line segment $AB = 6.8cm$

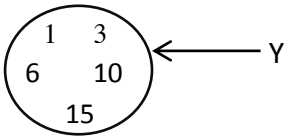
ii. Draw line BC such that $A\hat{B}C = 30^0$ and $BC = 6.8cm$

iii. Construct triangle ABC and measure the angles $B\hat{C}A$ and $B\hat{A}C$

iv. What can you say about the angles $B\hat{C}A$ and $B\hat{A}C$

v. Draw a parallel line to AB through point C and name it OC

(2 + 2 + 3 + +1 + 2)

07. 

Set Y is represented in Venn diagram.

i. Refer the given set Y and considering the common characteristic possessed by set, re – write it as descriptions.

ii. A= {letters in the word 'MAHARAGAMA'}

a. Write all the elements of set A with double brackets.

b. Find the number of elements of the set A

c. Write the elements of the above set have bilateral symmetry

(3 + 3 + +2 + 2)