

**MATHS**

GRADE - 10

**2018****ZONAL EDUCATION OFFICE - MANNAR**1<sup>ST</sup> TERM EXAM

INDEX NO

TIME : 3 HOURS

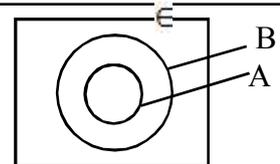
❖ Answer all the questions

PART - I

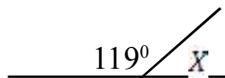
01) If the perimeter of a square is 32 cm, find its length

02) In between which two whole number  $\sqrt{39}$  value is03) Simplify  $\frac{7}{13} + \frac{3}{13}$ 04) Fill in the blank  $6x - 8y = \square (3x - \square)$ 

05) If 69% are girls in a Classroom, find out the percentage of boys in that classroom.

06) Shade the region  $A' \cap B$ 

07)

Find the value  $X$ 

08) 15 people complete a work within 8 days. If 12 people do that work, how many days it will be delay.

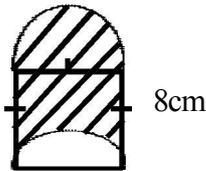
09) factorize  $x^2 - 1$ 10)  $(a-x)(b-x)(c-x) \dots (z-x)$  . Find the value

11) Make  $b$  as subject of formulae  $ax^2 + by = C$

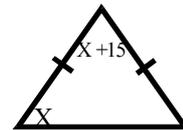
12) If  $X = 3, Y = (-4)$  find the value of  $(X + Y)^2$

13) calculate the  
1) gradient  
2) Intercept of the straight line  $2y - 3x = 1$

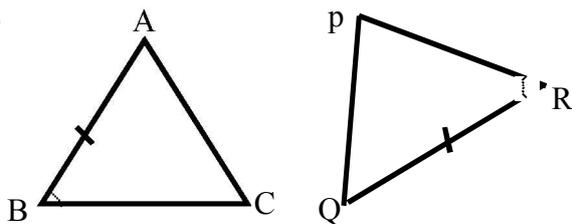
14) Find the area of the shaded part



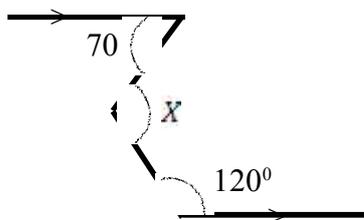
15) Find  $X$



16) What is the condition needed congruent the both triangles ABC and PQR according to the Case AAS.



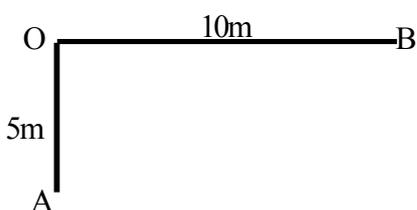
17) Find  $X$



18) If  $2x - 3y = 13$   
 $3x - 2y = 17$  find the value of  $(x - y)$  without find the values of  $x$  &  $y$  individual.

19) Mention the term needed to write with  $X^2 - 8x + 5$  to make that perfect square.

20) Draw the line which move the same distance from A, and B



**MATHS****GRADE - 10****2018****ZONAL EDUCATION OFFICE - MANNAR****1<sup>ST</sup> TERM EXAM****INDEX NO****TIME : 3 HOURS****PART - II****Answer any 6 Questions.**

- 01) A man decided to spend  $\frac{3}{5}$  of his salary for family requirements.  $\frac{1}{2}$  of the remaining amount for rent and the rest for his Saving
- What fraction of the remain salary after spend for his family requirements.
  - What fraction of the whole salary has been allocated for rent.
  - What fraction of the whole salary has beed saved
  - If he saved Rs. 9000, find his whole salary
  - For an unexpected reason he saved only Rs. 2250. Find out the percentage he saved on that month

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

- 02) a) Factorize the following
- $a + ax$
  - $a(x + y) - b(x + y)$
  - $a^2 - b + ab - a$
  - $x^2 - x - 72$
  - $2x^2 - \frac{1}{2}$

- b) Simplify  
 $103 \times 99 + 103$

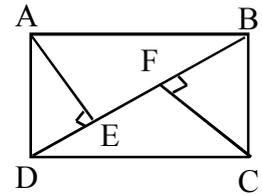
 $(1 + 1 + 2 + 2 + 2 + 2)$ **-01-**

03) 1) Write 2 conditions of congruence of two triangles

2) ABCD is a rectangle

i) Prove  $\triangle ADE \cong \triangle BCF$

ii) From the part (i) induct or Show  $AE = CF$



3) If  $BD = 10\text{cm}$ . and  $AE = 5\text{cm}$  find the area of the rectangle ABCD

(2 + 5 + 3)

04) The given stem - leave graph shows the runs of a cricket player

a)

Stem	Leave
0	0 7
1	4 6 6 6
2	0 5 9
3	7

1) Find out the number of games he played

2) What is the highest run he got

3) What is the run he got in maximum number of games.

4) How many times he didn't get any runs.

b) Maths marks of grade - 9 students is given below

Class interval	Mid- point	Frequency	fx
00 - 10	5	2	-
10 - 20	15	4	60
20 - 30	25	7	175
30 - 40	-	2	-
40 - 50	45	5	225
50 - 60	55	6	330
60 - 70	65	4	-
70 - 80	75	3	225
80 - 90	-	5	425
90 - 100	95	-	190
		$\Sigma f$	$\Sigma fx$

1) Fill the blanks in the table

2) Find the mean value in its first approximation

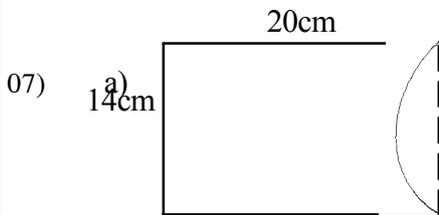
- 05) 1) Draw a triangle ABC such as  $AB = 8 \text{ cm}$ ,  $\hat{BAC} = 90^\circ$  and  $AC = 6 \text{ cm}$   
2) Write down the length of BC  
3) Draw the perpendicular of AB and name the point O which is intersect BC  
4) Draw a circle which center is "O" and its radius is OA  
5) Measure the radius and write.

(4 + 1 + 2 + 1 + 2)

06) Ravi, Dias and Latha decided to start a business, Ravi invest Rs 108000 on 01/01/2017, Dias invest Rs.96000 on 01/04/2017 and Latha invest Rs.144000 on 01/05/2017

- 1) Findout the ratio of dividing the profit at the end of the year.
- 2) Their profit is Rs.500 000 & they paid 8% tax for their profit. After that they divide the profit amond them
  - a) How much they paid for tax
  - b) How much dias got
  - c) How much latha get less than Ravi.

(3 + 2 + 3 + 2 )



A half circle is remove from the rectangle which have the length 20cm and breadth 14cm

- i) What is the area of the rectangle
  - ii) Find the area of the half circle which removes from the rectangle
  - iii) What is the area of remain part
- b) Write the percentage how much the perimeter was increased when removing the half circle.

(2 + 2 + 2 + 4 )