வலயக்கல்வி அலுவலகம் – மன்னார்

முதலாம் தவணைப்பரீட்சை – 2018

கணிதம்

32 | T | I

தரம் – 11

நேரம் : 2 மணித்தியாலயம்

சுட்டெண்

சரியானதென உறுதிப்படுத்துகிறேன்.

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நோக்குநரின் ஒப்பம்

முக்கியம்

இவ் வினாத்தாள் 8 பக்கங்களைக் கொண்டுள்ளது.

இப்பக்கத்திலும் பக் 3 இலும் குறித்த இடங்களிலும் உமது சுட்டெண்ணைத் திருத்தமாக எழுதுக.

எல்லா வினாக்களிற்கும் விடைகளை இத்தாளிலேயே எழுதுக.

விடைகளைப் பெறும் விதத்தைக் காட்டுவதற்கு ஒவ்வொரு வினாவிற்கும் கீழே விடப்பட்டுள்ள இடத்தைப் பயன்படுத்துக.

பகுதி Aயின் 1 - 25 வரையுள்ள வினாக்கள் ஒவ்வொன்றின் விடைக்கு இரண்டு புள்ளிகள் வீதமும் பகுதி Bயின் வினாக்கள் ஒவ்வொன்றின் விடைக்கு 10 புள்ளிகள் வீதமும் வழங்கப்படும்.

பரீட்சகரின் உபயோகத்திற்கு மாத்திரம்

வினா எண்	புள்ளிகள்
1 - 25	
1	
2	
3	
4	
5	
மொத்தம்	

.....

புள்ளி வழங்கியவர்

.....

பரீட்சித்தவர்

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கணிதப் பரீட்சகர்

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பிரதான பரீட்சகர்

❖ **Answer all the questions in this Sheet**

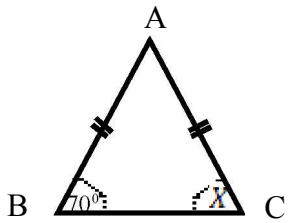
PART - I A

01) A house of assessed a quarter value Rs. 300 calculate the rates that have to be paid for annual

02) Simplify $\sqrt{72}$

03) a factor of ax - ay is (x- y). Write down the other factor

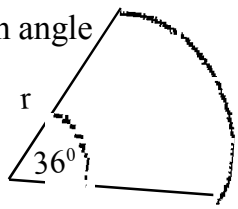
04) ABC is a isosceles triangle. If $A\hat{B}C = 70^0$ find out the value of x



05) Find out the LCM (least common multiple) of $3ab^2$, $4a^2b$

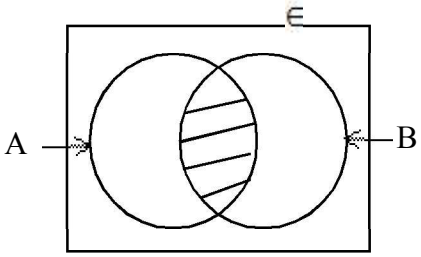
06) If $3^4 = 81$ Write this in log from

07) The figure denotes a sector of a circle of radius r with angle at the centre 36^0. Find its perimeter.



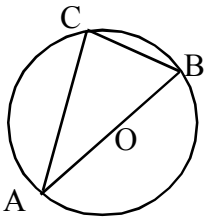
08) 18 mandays needed to complete a task. Find the number of days required by 3 people to complete the same task.

09) Describe the shaded part using descriptive method.



10) Simplify $\frac{1}{2x} - \frac{1}{4x}$

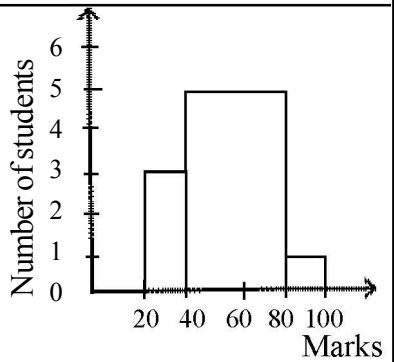
11) O is centre of the circle. AB is diameter
if AB = 5m, CB = 3m, find the length of AC



12) if $2x + y = 9$, $x + 2y = 3$ without simplify this find out the value of (x - y)

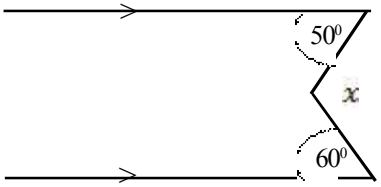
13) A television Purchased for Rs. 25000 was proposed to sell 12% of profits. Find out the marked price.

14) The marks of a group of students were shown in the given chart. Find out the number of students who participated the exam.



15) Write down the gradient and intercept of the straight line represented by $2y = 2x - 1$

16) Find the value of x

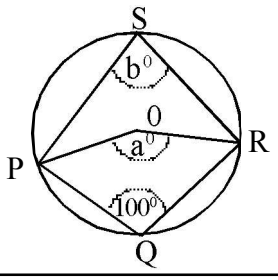


17) Write the surtable number in the box, to make this as a perfect square

$q^2 - 6q + \square$

18) $2x - 6 \leq 2$ Represent in a number line

19) O is the centre of the circle Find the values of a & b

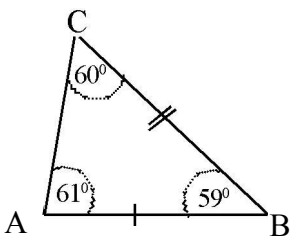


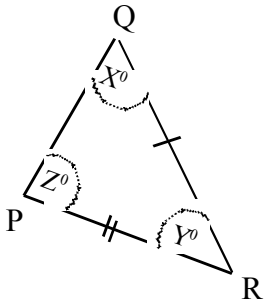
20) if lg2 = 0.3010, lg 3 = 0.4771 find the value of lg 1.5

21) Make R as the subject in the given equation $2hR - h^2 = C^2$

22) If a bus take 3 hours to travel 48km, Find it's Speed.

23) If both triangles ABC and PQR congruent find out the value of x and y





24) By using the given chart find out the value of $\sqrt{90}$ its first approximation.

X	9.3	9.4	9.5	9.6
X^2	86.49	88.36	90.25	92.16

25) Find the 15th term and common difference of the given arithmetic progression

$X, X + 3, X + 6$

(25x2 = 50marks)

Part - I B

❖ Answer all questions

01) Mr.Kothandam donated a certain amount of money to the elders' home They used 1/2 of the amount for food and 2/9 part for buy cloths.

1) What part of whole money used for both food and buying cloths

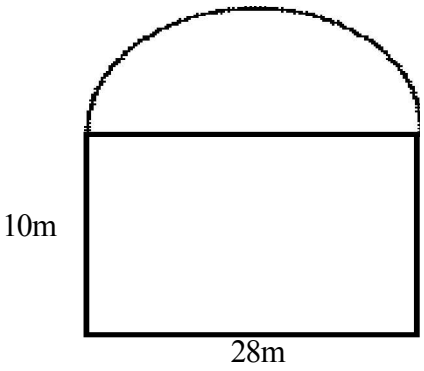
2) Remaining of whole money 1/5 is used for entertainment. Find the part (fraction) of whole money which used for entertainment.

3) Remaining of whole money (After used all food, cloth and entertainmed) is used to renew the elders' home Find this part as a whole money

4) The amount of money used for renovation work is Rs. 20000 so find the total amount of money that Mr.Kothandam donated to elders' home.

(3 + 2 + 3+ 2)

02) The diagram shows a concert hall. Which consist semi circle part of stage and rectagular part for spectators.



1) Find the radius of semi circle

2) Find the arc of length

3) Find the perimeter of the concert hall

4) Find the area of the stage

5) If the cost for $1m^2$ carpet is Rs. 100, Find the total amount needed for spreading carpet to the stage ?

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

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03) The cost of making a cupboard is Rs. 1600. The ratio between raw material and douceur is 3 : 2

1) Find the cost of douceur.

2) What is the marked price to get 30% profit to sell this cupboard

3) If Douceur is increased by the ratio of 5 : 4, Find the douceur cost.

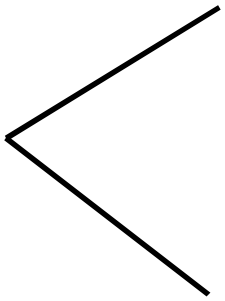
4) If their is no changes in the cost of the raw materials, find the product cost of the cupboard.

5) Now he marked to sell the cupboard Rs. 24640 Find the profit percentage.

(2 + 2+ 2 + 2 + 2)

04) a) The probability of germinating bean seeds in a sample is 3/7

1) Show in a tree diagram for the event of germinating and non germinating seeds



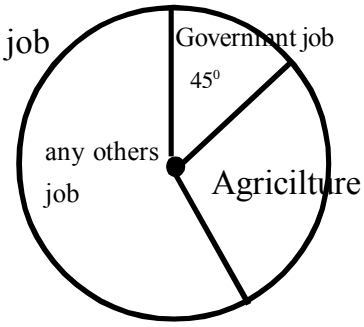
2) After the seeds geiminate, the probability of produce beans is 7/8. Expand the above tree diagram to show producing beans and non producing beans

3) Find the prababillty of producing beans by using above tree diagraw.

b) Two dies are maked 1, 1, 2, 2, 3, 3 Find the probability of getting same number in both dies.

(4 + 2+4)

05) a) Given pie chart shows the works of 200 people



1) Find the number of people doing government job

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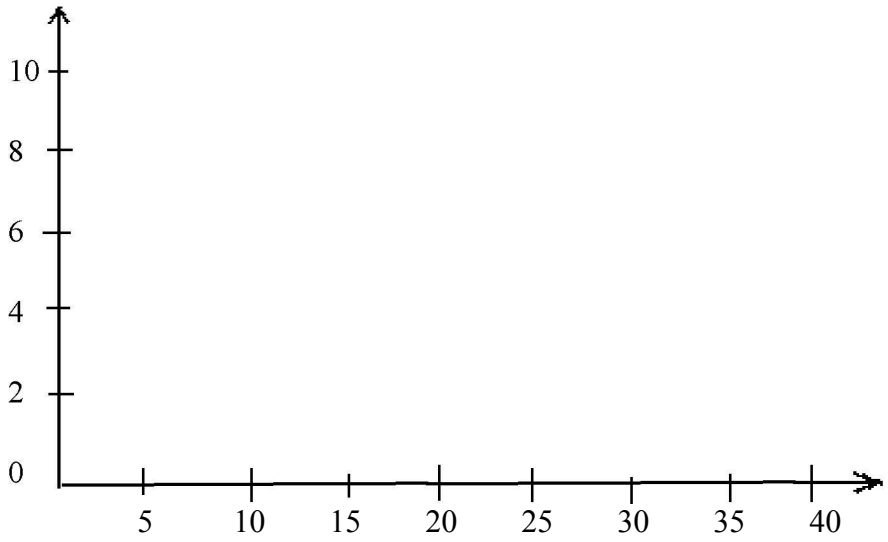
2) Number of people doing Agricilture is 70 find the angle of this sector.

.....

b) The given chart shows the amount of rubber milk collecting in a factory and number of days.

Amount of rubber milk (l)	10 - 15	15 - 20	20 - 25	25 - 30	30 - 40
Number of days	2	5	10	9	4

1) Show above data in a bar chart.



(3 + 3+4)

MATHS

GRADE - 11

2018

ZONAL EDUCATION OFFICE - MANNAR

1ST TERM EXAM

INDEX NO

TIME : 3 HOURS

- Answer 10 questions, selecting 5 form part A and 5 from Part B
- Volume of cone is $=\frac{1}{3}\pi r^2 h, \pi = \frac{22}{7}, r -$ radius, h = height

பகுதி II A

01) a. When a computer is imported 25% of its value has to be as customs duty. With out included the duty the cost of the computer is Rs 100 000.

1) Find the amount of customs duty that has to paid?
2) Find the cost of computer with the customs duty included.
3) If he sells the computer with 10% of profit, find the selling price of that computer

b. A man take a loan of Rs. 60 000 at an annual simple interest rate of 12%

1) Find the interest for a year
2) if he settled his loan after two years find the total amount he need to paid.

02) An incomplete table of value for the graph $y = X^2 - 3$ is given below

X	-3	-2	-1	0	1	2	3
Y	6	1	-2	.....	-2	1	6

a. 1) if Y = 0 find the value of x

2) Draw the graph (taking 10 subunits to represent a unit on both x, & y axes)

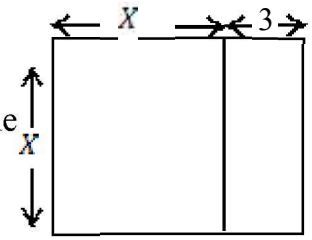
b. Answer the given questions by using the graph

1) Write the equation of the axis of symetry
2) Write the coordinates of the turing point
3) Find the solutions of $x^2 - 3 = 0$ from the above graph
4. Find the range of values of a X for which the function is negetive

03) a) Simplify $\frac{4}{3x} \div \frac{1}{6xy}$

b) The figure represent a square of side length x. It will be changed as a rectangle When adding 3 units in one side as shown in the figure

1) Write the length of the rectangle
2) If the area of the rectangle is 40 square units. prove that $x^2 + 3x - 40 = 0$
3) By Solving the above equation find the length of the square

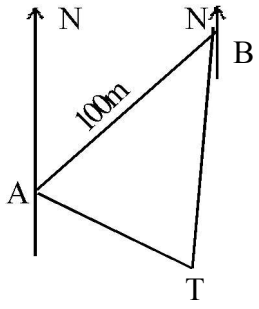


04) Sketch diagram of a land is shown in the given figure.
The bearing of tree (T) from as 110^0, The bearing of B is 060^0 and 100m from A, also bearing of T is 200^0 from B

a) By using suitable scale draw the scale diagram

b) By using your scale diagram

1) Find the distance from A to T
2) Find the distance from B to T
3) Prove that the angle $A\hat{T}B = 90$



05) Consumption of water in 100 houses is given below as a chart

Units of water $a < x \leq b$	50 - 60	60 - 70	70 - 80	80 - 90	90 - 100	100 - 110	110 - 120
Number of houses	7	14	24	32	18	3	2

1. What is the modal class of the above frequency distribution

2. Find the mean value

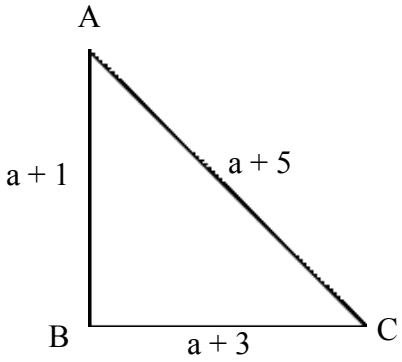
3. If one unit is Rs. 10 find the average cost of one house

4. Find out the maximum cost of one house

06) a) Simplify

$$X - Y = 5$$
$$3X + 2Y = 10$$

b) Perimeter of ΔABC is 24cm



1) Write an equation by using 'a'

2) By Solving your equation and find the length of each sides

3) According to the size of length name the type of the triangle.

PART II B

07) n term of an arithmetic progression is $Tn = 7n - 1$

1) By writing first 3 terms find the 1st term and common difference

2) Find the 20th term

3) Which term is 83 in this arithmetic progression

4) Find the sum of first twelve terms.

08) Use only a ruler and a compass draw clearly

1) Draw ΔABC such as $AB = 6cm, A\hat{B}C = 120^0, BC = 4cm$

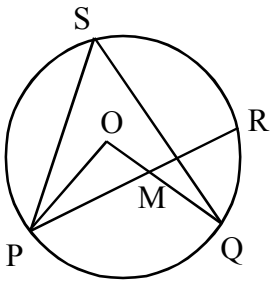
2) Draw the perpendicular from C to extended line AB and name it as D

3) Draw a perpendicular bisector of AD and name the point O which is meet the side AC

4) Draw a circle which O is the centre and OA radius

5) measure the radius and write

09) O is the centre of the circle $P\hat{O}Q = 120^0$



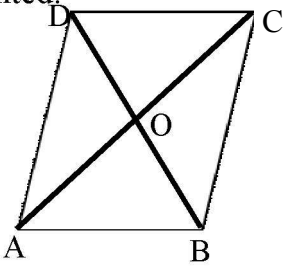
1) Find the value of $P\hat{S}Q$

2) Write the theorem which used to find the above value.

3) What is the relation seen in between angles $P\hat{S}Q, P\hat{R}Q$

4) Prove that $P\hat{R}Q = M\hat{Q}R - O\hat{P}M$

10) ABCD is a parallelogram Diagonas AC and BD are intersect at the point O
The perpendicular of AC go through O and meet AD at E. CE jointed.



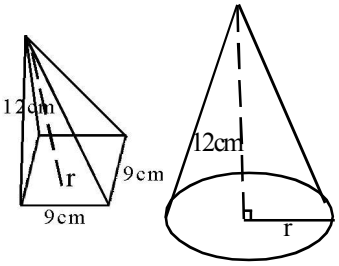
1) Redraw this parallelogram and show the datas on it

2) Show $\Delta AOE \equiv \Delta COE$

3) Prove that BCE is bisect the line CA .

4) The extented line EO intersect BC on F
What is the speccial name of quadrilateral AFCE Give reasons.

11) A square base pyramid with 9 cm square base and a cone shown in the figure. Both has same height 12 cm and same volume.

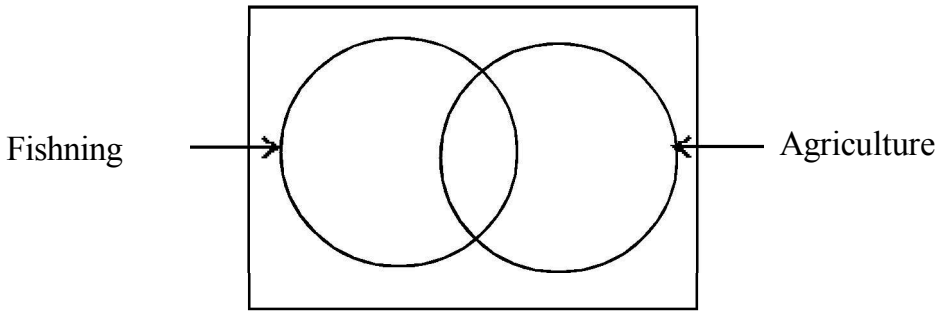


1) Find the volume of square based right pyramid

2) Show the radius of cone is $r = \sqrt{\frac{567}{22}}$

3) Find the radius of cone by using log table

12) The data of 50 families living in a village are shown in venn diagram. 32 familles involving in fishring. 22 families involving only in fishring. 3 families are not involving in both fishring or agriculture



1) Show the data in the venn diagram
2) How many families are involving both two jobs
3) How many families are involving only in agriculture
4) What is the probability of doing agriculture if we select a family in the village
5) Shade the part to show the families they involve in only one job.