

Part A					
Answer all the questions on this paper itself.					
1. Select and underline the nearest value for $\sqrt{7}$.					
i. 2.5 ii. 2.6 iii. 2.7 iv. 2.4					
2. How many kilometers does a train travels in 15 minutes, if it is travelling at a uniform speed of 72 kilometers per hour?					
3. Express in index form. $log_2 32 = 5$					
4. Simplify. $\frac{3}{4y} - \frac{1}{2y}$ Education					
5. According to the information given in the figure, find the value of x.					
6. If a person who borrowed Rs. 2 500 for annual simple interest, pays Rs. 250 as the interest at the end of the year, find the annual simple interest rate.					
7. Find the least common multiple of the algebraic terms a^2 , $2ab$.					



15. According to given information, find the values of *x* and *y* in the parallelogram PQRS.



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- 03. (a) 3 men who work 6 hours per day, take 2 days to build a parapet wall.
 - i. How many man hours are needed to build the wall?
 - ii. How many days will it take for two men who work 9 hours per day, to complete the same work?

(b) When a car is imported 15% of its value has to be paid as duty. The imported value of the car is Rs. 750 000.

- i. What is the value of the car after paying the duty?
- ii. At what price should the car be sold to make a profit of 12%?
- 04. In a netball team there are 7 equally talented players. Four of them are wearing caps, two of them are wearing red colour belts and one is wearing black socks. By taking those who wear caps as A1, A2, A3, A4, those who wear red colour belts as B1 and B2, the one who wear black socks as C1,
 - i. Write the sample space (S) to represent all the players of the team.

If a player is selected randomly,

- ii. Find the probability of that person being a one who wears a cap.
- iii. Find the probability of that person being a one who wears black socks.
- iv. Find the probability of that person being a one who wears a red belt or black socks.
- v. Find the probability of that person being a one who wears a red belt but not a cap.

- 05. As shown in the figure, AED sector is removed A
 - i. What is the radius of the sector?
 - ii. Find the perimeter of ABCDE metal lamina.

iii. Find the area of the ABCDE metal lamina.

iv. If instead of removing ADE sector, a right angle triangular portion ADF where F is situated on the line AB and equal in area of ADE is removed from the rectangle, draw the sketch of the newly obtained lamina on the same diagram and write the special name in which the shape is called.

 \Box^{B}

С

14 cm

Έ

20 cm

අධ්යාපන

D

v. Find the AF length.

සියලු ම හිමිකම් ඇවිරිණි / முழுப் பதிப்புரிமையுடையது / All Rights Reserved கெக்லாவி பகுவர் சம்வாக செயர்கைகள் மேல் மாகாணக் கல்வித் திணைக்களம் மேல் மா Department Of Education – Western Province Dep ළාත් අධාාපන දෙපාර්තමේන්තුව ව බස්නාහිර බස්නාහිර පළාත් අධාාපන දෙපාර්තමේන්තුව ல்விக் கிணைக்களம மேல் மாகாணக் கல்விக்கி Department Of Education - Western Province Dep மேல் மாகாணக் கல்வித் திணைக்களம் බස්නාහිර පළාත් අධාාපන දෙපාර්තමේන්තුව බස්නා மேல் மாகாணக் கல்வித் திணைக்களம் மேல் ம . ළාත් අධාාපන දෙපාර්තමෙන්තුව ව බස්නාහිර පළාත් හේඛාද්, ළිකණාස්සආග රිගහ් ගாகாணக் සහ්ඛාද් ජූ **Department Of Education – Western Province** Department Of Education Department Of Education – Western Province De - Western Province දෙවන වාර ඇගයීම முதலாம் தவணை பரீட்சை - 2018 **Second Term Evaluation** ශේණිය විෂයය ්පතුය කාලය 10 வினாத்தாள் Π காலம் தரம் பாடம் **Mathematics** 3 hours Grade Subject Paper Time ✤ Answer 10 questions selecting 05 questions from part A and 05 questions from part B. Each question carries 10 marks. Part A Answer 05 questions only. 1. (a) The annual assessed value of a house which is lies within the limits of a certain municipal

- . (a) The annual assessed value of a house which is lies within the limits of a certain municipal council which charges12% of annual rates is Rs. 18 000. The house owner is rented it for monthly rental of Rs. 10 000.
 - i. What is the annual rates that should be paid for the house?
 - ii. What is the annual income the house owner gains by renting the house?
 - iii. If Rs. 10 000 should be allocate for the maintenance of the house, find the net profit he gains after paying the tax.
 - (b) If a person who loaned some money for annual simple interest rate of 12% paid Rs. 2 160 as the interest after 3 years, find the amount he loaned.
- 2. An incomplete table of values which is used to draw the graph of the function $y = 2x^2 9$ is given below.

x	- 3	- 2	- 1	0	1	2	3
У	9		- 7		- 7	- 1	9

- i. Fill in the blanks in the table.
- ii. Using a suitable scale, draw the graph of the function.

Using the graph,

- iii. Find the minimum value of the function.
- iv. Write the equation of the axis of symmetry.
- v. Write the range of values of *x* where the function decreases positively.

- 3. In a box there are red and blue colour balls. When the twice of the number of red colour balls is added to the three times of number of blue colour balls, the answer is 37. When the two times of the number of blue colour balls is subtracted from the four times of the number of red colour balls the answer is 18. By taking the number of red colour balls as x and the number of blue colour balls as y,
 - i. Using the above information build up two simultaneous equations.
 - ii. By solving the two equations, find the number of red colour balls and nmber of blue colour balls in the box separately.
 - iii. When $\frac{1}{3}$ of the total number of balls in the box is put into a bag, the number of balls in the bag became *a*. By taking the number of balls in the box as *p*, write dawn a relationship including *a* and *p*.
- 4. If the area of the rectangle ABCD where AB = (2x + 1)cm and BC = (x + 2)cm is 77cm², build up an quadratic equation including *x* and find the length of AB.
- 5. Information on the number of coconuts plucked from 30 coconut trees in a certain coconut estate is given in the following table. (6 -10 means greater than or equal to 6 and less than 10)

Frequency	
(No of trees)	
5	throno a
8	
10	
4	
3	
	Frequency (No of trees) 5 8 10 4 3

- i. Using $mean = \frac{\sum fx}{\sum f}$ where the mid value is denoted by *x*, calculate the mean number of coconuts plucked from a tree to the nearest whole number.
- ii. Explain by giving reasons that the number of coconuts plucked from the state exceeds 350.
- 6. Length, breadth and height of a cuboid shaped empty tank is 5m, 4m and 3m respectively.
 - i. Calculate the volume of it in liters.
 - ii. Water flows into the tank at a uniform rate of 350*l* per minute and water flows out of the tank at a uniform rate of 300*l* per minute. How many hours will it take to fill the tank completely?
 - iii. Find the height of the water in the tank after 45 minutes, in centimeters.



- ii. Construct $P\hat{Q}$ R such that, QR = 6cm and $P\hat{Q}R = 120^{\circ}$.
- iii. Construct the perpendicular bisectors of the sides PQ and QR and mark the intersection point of them as O.
- Name the meeting points of the above perpendicular bisectors and PQ and PR as S and T respectively. Construct a circle with the centre O and radius OS. Measure and write the radius of the circle.

- 10. In the ABCD parallelogram, mid-point of the side DC is K. AD = DK and BC = CK. Copy the diagram on your answer sheet.
 - i. Show that $B\hat{A}D$ is bisected by AK and $A\hat{B}C$ is bisected by BK.
 - ii. Show that $AKB = 90^{\circ}$.
 - iii. Draw KX parallel to DA and meets the line AB at X. Show that,

11. In the triangle PQR shown in the figure, mid point of the

side PR is S and $S\hat{P}Q = S\hat{R}Q$. Copy the diagram on your

Congruent the triangles PQS and SQR and show

When PR is produced to T, if $P\hat{Q}S = x$, write the

magnitude of $Q\hat{R}T$ in terms of x. (Give reasons)

Area of
$$\triangle AKB = \frac{1}{2}$$
 Area of \square ABCD



12. (a) $\epsilon = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$ A = $\{3, 6, 9\}$

 $B = \{ 2, 4, 6, 8, 10 \}$

that QS \perp PR.

- i. Represent the above information on a Venn diagram.
- ii. Find n ($A' \cap B$).

answer sheet.

i.

ii.

- (b) Number of cricket players in a certain sports club is 25. Number of football players are 28. Every member do at least one of the above sports. 8 do both sports mentioned above. There are no other sports in this sports club.
 - i. Represent the above information on a Venn diagram.
 - ii. How many members are there in the sports club?
 - iii. How many members do not play football?

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