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மாகாணக் கல்வித் திணைக்களம் - வட மத்திய மாகாணம்  
DEPARTMENT OF EDUCATION - NORTH CENTRAL PROVINCE



Grade

07

## Third Term Test -2019

### Mathematics - I, II

School : .....

Name of the Student Index No: .....

Time: 02 hrs.

### Part I

- Answer all the questions.

01. Write two different rectilinear plane figures in the faces of the triangular prism.

02. Write the set "A" using elements

$$A = \{ \text{Whole number between 2 and 5} \}$$

03. Expand and find value of  $2^3 \times 3$

04. Simplify,  $4x + 2x - x$

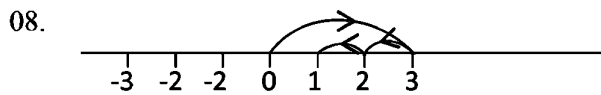
05.



Measure and Write the magnitude of  $\angle PQR$

06. Express as a percentage  $\frac{4}{5}$

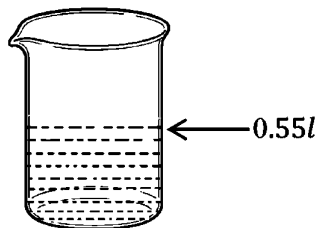
07. Simplify ,  $6 + 4 \div 2 = \dots\dots\dots$



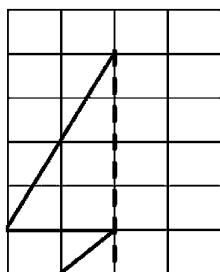
Fill the blanks using the above number line.

$(+3) + \dots\dots\dots = \dots\dots\dots$

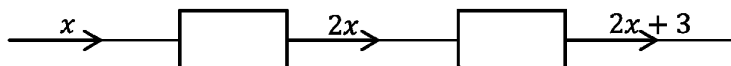
09. Express the volume of the vessel in *ml*.



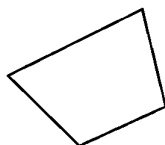
10. Complete the diagram to get a bilateral symmetrical figure.



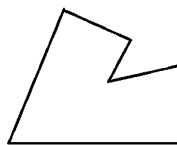
11. Complete the given flow chart for the equation  $2x + 3 = 5$



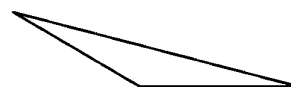
12. Underline the concave polygons from the given polygons.



i.



ii.



iii.

13. Select and write two leap years AD 2000 AD 2019 AD 2100 AD 2400.

14. Fill in the blanks  $2m\ 5m + 3m\ 8m = \dots\dots\dots m\dots\dots\dots cm.$

15. “Rombouse is not a regular polygon”, give reason for it.

16. The perimeter of a square is  $20cm$

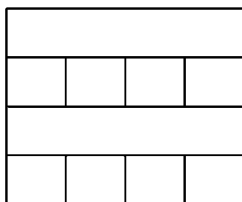
i. Find the side length.

ii. Find the area of the square.

17. Construct a line segment  $AB = 7.5cm$

18. Express  $\frac{8}{25}$  as a decimal number.

19. The given figure is a pure tessellation some lines are disappear. Re-draw the lines to make a pure tessellation.



20. Underline the examples for random event.

i. Obtaining the head when a coin is tossed.

ii. Obtaining number 6 when a tetrahedron number as 1,2,3,4 is tossed.

iii. A rubber ball floting on the water.

## Part II

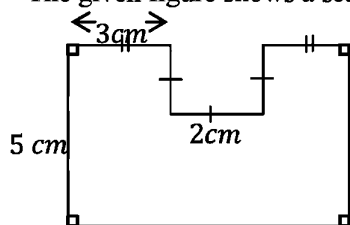
- Write only five questions including the first question.

- 01.
- a.
- i. Draw a Cartesian plane with 06 units for both  $x$  axis and the  $y$  axis. (02)
  - ii. Plot the given points on the Cartesian plane. (04)
- |            |            |            |
|------------|------------|------------|
| $P (1, 1)$ | $Q (1, 5)$ | $R (5, 5)$ |
| $S (5, 3)$ | $T (3, 3)$ | $U (3, 1)$ |
- iii. Join  $P, Q, R, S, T, U$  and get a closed figure. (01)
  - iv. Draw the symmetrical axis on it. (01)
  - v. Produce the symmetrical axis to meet  $x$  and  $y$ . (01)
  - vi. Name the intersecting points of  $x$  and  $y$  as  $A$  and  $B$ , and write the coordinates of  $A$  and  $B$ . (02)
- b. If the side length of a small square in the grid is  $1\text{ cm}$  Find the area of the figure  $P, Q, R, S, T, U$ . (02)
- c. If there are 4 congruent grids with the above shape draw a tessellation using 4 congruent grids. (03)

- 02.
- a.
- i. Compare the fractions using " $>$ ", " $<$ "  $\frac{2}{3}$ ,  $\frac{3}{7}$ . (02)
  - ii. Simplify,  $2\frac{2}{5} + 1\frac{1}{4}$  (03)
  - iii. If  $1\frac{1}{4}\ell$  of paint is used from  $4\ell$  of paint, Find the remaining amount of paint. (02)
- b.
- i. Write an equivalent ratio,  $2 : 4 : 5$  (02)
  - ii. The ratio in which a sum of money was divided between  $A, B$  and  $C$  is  $2 : 5 : 3$  If  $B$  received Rs.700/-, Find the money received by  $C$ . (02)

- 03.
- a.
- i. Draw a square with the side length of  $4\text{ cm}$  and name it as  $A, B, C, D$  (02)
  - ii. Construct equilateral triangles on every side of the square. (03)
  - iii. The composite figure constructed above can be used as a net of a solid, what is that solid. (01)
- b.
- i. Write the number of faces, vertices and edges of the above solid. (03)
  - ii. Show that the above solid satisfy Euler's relationship (02)

- 04.
- a. The given figure shows a scale diagram of a land.



- i. Find the perimeter of the figure. (02)
  - ii. Find the area of the figure. (03)
- b.
- i. If  $2\text{ cm}$  is represented by  $1\text{ cm}$ , write it as a scale. (02)
  - ii. Find the actual perimeter of the land. (02)
  - iii. It is proposed to fix concrete poles around the land with the  $2\text{ m}$  distance between two poles, Find the number of poles needed. (02)

- 05.
- a.
- i. Copy the given sentences, If it is a set put a “✓” mark and if it is not a set put “✗” in front of it. (03)
- (a) Beautiful students in your class.
- (b) The persons in your village whose monthly income is greater than Rs.35000, 00
- (c) Rich persons in your village.
- ii. Write the set “A” with the elements (01)
- $A = \{ \text{Positive integers} \}$
- Represent the set using a venn diagram. (02)
- $B = \{ \text{whole number from 1 to 5} \}$
- Write the elements of the set “C”
- $C = \{ \text{The letters of the word “KABITHIGOLLAWA”} \}$  (01)
- b. It need Rs. 305.00 to by 5 oranges with a price of Rs.  $x$  and 3 apples with a price of Rs. 35. (01)
- i. Construct and equation for the given data using . (01)
- ii. By solving the equation find the price of a an orange. (03)

06. The given data shows a results of a research about infections in a village nearly 4 years.

Year	No : of patients	
	Malaria	Dengue
2015	50	25
2016	40	40
2017	20	50
2018	05	60

- i. Represent the given data using a multiple column graph. (06)
- ii. What is the infection increased yearly. (01)
- iii. The department of health says that the “Malaria is moderate successfully” Are you agree with it, give reason. (02)
- iv. If 3 dengue patients dead in 2018. What is the percentage of dead dengue patients. (02)