Provincial Department of Education - NWP

වයඹ පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව

Third Term Test - Grade 7 - 2019

තෙවන වාර පරීක්ෂණය - 7 ශ්‍රේණිය - 2019

Name/Index No: .... **Mathematics** Time: 02 hours
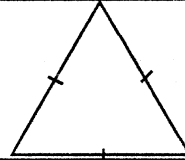
Part I

- Answer all the questions from 01 - 20 on the paper itself.
- Each question in part I carries two marks.

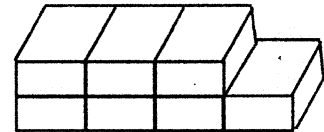(1) Draw all the axes of symmetry of the given figure.

(2) What type of angle is 135^0?

(3) Find the value of $(-2) + (+2)$

(4) Add. $1.2 + 3.45$

(5) The diagram shows how small cubes each of edge 1 cm are placed to make a solid. Find the volume of this solid.
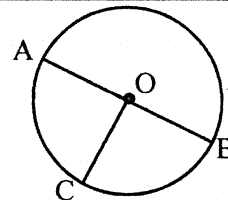

(6) Mark the statements which represent a set using (✓) from the statements given below.
   (i)   Long rivers in the world   (   )
   (ii) Prime numbers between 1 and 10 (   )
   (iii) Colours of the rainbow   (   )

(7) In the circle shown in the diagram, name
   (i) the centre
   (ii) the diameter

(8) Express 0.25 as a percentage.

(9) If ▨ represents 8 books in a picture graph drawn to represent the number of books distributed to the students in grade 7, find the number of books represented by ▨▨▨▨

(10)   Find the perimeter of the hexagon which is constructed
        by using the equilateral triangle given below.

6 cm
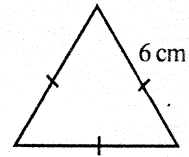
(11)   Write all the outcomes obtained when tossing a coin.

(12)   125 is written in index form as.

        125 = $\boxed{}^{\boxed{}}$ Write suitable numbers for the blank cages.

(13)   Express $1\frac{1}{4}$ as an improper fraction.

(14)   If $x = 2$ and $y = 4$, find the value of $3x^2y$.

(15)   If 10 bottles each of capacity $750m\ell$ were filled from a water vessel which contains 40ℓ, find the remaining
        amount of water in the vessel.
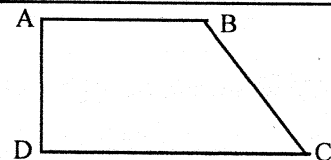
(16)   Solve. $2x - 1 = 5$

(17)   Simplify. $9 - 2 \times 4$

(18)   Express 1 hour and 30 minutes as a ratio.

(19)   Find the highest common factor of 6 and 8

(20)   Name the pair of parallel lines in the trapezium given below.

Part II

(1) The information collected about the number of students in the parallel classes of grade 7, in Veera Maha Vidyalaya is given in the table below.

An incomplete multiple column graph drawn to represent the above information is given below.

class	Number of students	
	Boys	**Girls**
7A	12	20
7B	16	16
7C	20	24
7D	12	08
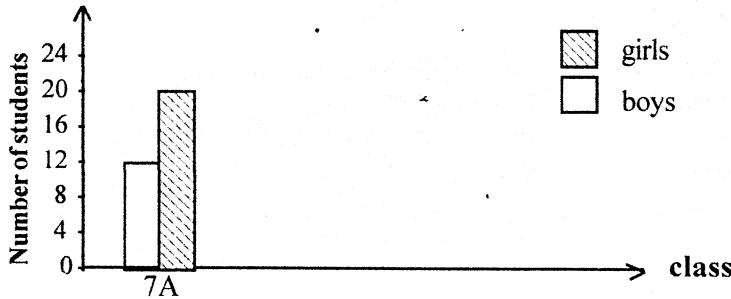
- (i) Complete the multiple column graph. (6 marks)
- (ii) Which class has the most number of students? (2 marks)
- (iii) How many girls in total are there in all four classes? (2 marks)
- (iv) The students in grade 7D study subjects in English medium and 300 exercise books were given to distribute among them. If these books are distributed among them equally, find the number of books receieved by each student. (3 marks)
- (v) Express the number of girls in 7B as a percentage of the total number of students in that class. (3 marks)

(2)
- (i) Draw a cartesian plane, marking the numbers from 0 - 7 along both x and y axes . (2 marks)
- (ii) Mark the following points on it and join them in order to obtain a rectilinear closed plane figure.
  A = (2, 2)   B = (2, 7)   C = (7, 2) (3 marks)
- (iii) Write the name of the figure you obtained. (2 marks)
- (iv) Write the special names used for this figure.
  a) according to the sides
  b) according to the angles (2 marks)
- (v) Write the coordinates of a point inside this figure in which the x coordinate is greater than its y coordinate. (2 marks)

(3)
- (a)
  - (i) Name two regular polygons, which can be used to create a pure tessellation. (2 marks)
  - (ii) Create a semi-pure tessellation by using any two suitable plane figures. (2 marks)
  - (iii) What is the sum of the angles around a vertex point in a tessellation created using rectilinear plane figures? (2 marks)
- (b)
  - (i) Draw a concave polygon with 6 sides. (2 marks)
  - (ii) Three statements about the plane figure shown in the diagram are given below. If the statements are correct mark (✓) and if they are incorrect mark (✗). (3 marks)
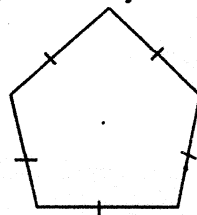
  - (a) It is a convex polygon   (   )
  - (b) It is a concave polygon   (   )
  - (c) It is a regular polygon   (   ) (3 marks)

(4)
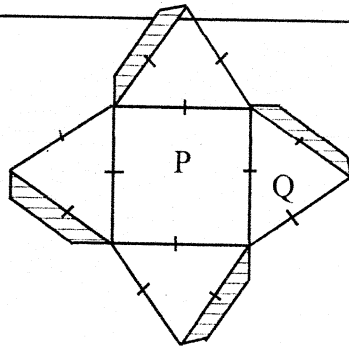
(a) (i) What is the solid that can be made by using the above net? (1 marks)

(ii) What is the use of the shaded parts? (1 marks)

(iii) Write the number of faces, vertices and edges in this solid. (3 marks)

(iv) Show that the above values satisfy the Euler's relation. (2 marks)

(v) Write the number of faces in the solid which is made by coinciding and pasting the square faces of two identical solids that you mentioned above. (2 marks)

(vi) Name the plane figures marked as P and Q in the above net. (2 marks)

(5) (i) Construct a circle of radius 4 cm and mark its centre as O. (2 marks)

(ii) Construct a regular hexagon of which the vertices lie on the above circle and name its vertices as A, B, C, D, E and F. (4 marks)

(iii) Find the perimeter of this regular hexagon. (2 marks)

(iv) Join the points B and E using a straight line. (1 marks)

(v) Suggest a name for the plane figure ABEF. (2 marks)

(6) (a) The distances run by two athletes during 2 days, when practicing for the provincial sports meet are given below.

Day Name	Amasha	Kaveesha
Saturday	1km 200m	1km
Sunday	2km 400m	2km 200m

(i) Find the distance run by Kaveesha on Sunday in metres. (1 mark)

(ii) How much further does Amasha run on Sunday than on Saturday? (2 marks)

(iii) What is the total distance run by Kaveesha during these two days? (2 marks)

(b) (i) Rs. 5000 was granted for these two athletes to buy their sports requirements. If that amount was divided between Amasha and Kaveesha in the ratro 2 : 3, find the amount received by each of them. (3 marks)

(ii) The trophy awarded to the winner was made by mixing Silver and copper in the ratio 4 : 3. If the mass of Copper in the trophy is 18 g, find the mass of Silver in it. (3 marks)

(7) The diagram shows the floor plan of a building drawn to the scale 1 : 200. A and B are two parts of the building.
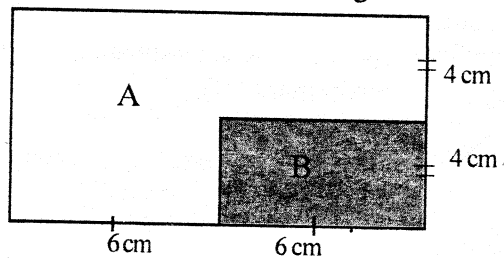
(i) What is the actual distance represented by 1 cm in the above scale? (1 marks)

(ii) Find the floor area of the building in this scale diagram. (2 marks)

(iii) Find the area of part 'B' in the scale diagram. (2 marks)

(iv) Find the area of part 'A' in the scale diagram. (2 marks)

(v) Find the actual length and breadth of part B. (4 marks)