Questions 1 to 10 carry 2 marks each. Show your working clearly in the space provided for each question and write your answers in the spaces provided. For questions which require units, give your answers in the units stated.
(20 marks)

1. Alice arranged some beads as shown below. If she continued in this pattern, how many beads would she need for figure 10 ?


Figure 3


Figure 4


Figure 1 Figure 2

Ans: $\qquad$
2. The figure below is made up of 2 squares, $A B C D$ and $E F G H$. They are not drawn to scale. Points $E, F, G$ and $H$ are mid-points. $E F=2 \mathrm{~cm}$.
Find the area of the bigger square, $A B C D$.


Ans:
$\mathrm{cm}^{2}$
3. A truck can travel 9840 m on $3 l$ of petrol.

How far can the truck travel with 15 l of petrol? (Give your answer in km and m )

Ans: $\qquad$ km $\qquad$ m
4. How much water must be poured from beaker $X$ to beaker $Y$ to make the amount of water equal in both containers?


Ans: $\qquad$ $m l$
5. A family clinic opens on weekdays as shown in the table below. How many hours and minutes is the clinic open each day?

## Weekday Opening Hours

8.30 a.m. - 12 noon
2.00 p.m. -4.30 p.m.
6.00 p.m. -9.30 p.m.

Ans: $\qquad$ h $\qquad$ min
6. The average height of Billy, Dennis and Edward is 1.35 m The average height of Billy and Edward is 1.25 m . Find Dennis's height. (Give your answer in cm)
7. The bar graph below shows the number of Primary 6 pupils in each class in Genius Primary School.

Study the graph carefully and answer the question below.
Primary 6 Pupils in Genius Primary School


What is the average number of pupils in the Primary 6 classes at Genius Primary School?

Ans: $\qquad$
8. The figure below is not drawn to scale.
$A B C D$ is a rectangle. $C D E$ is an equilateral triangle.
Find the sum of $\angle \mathrm{BCE}$ and $\angle \mathrm{CBE}$


Ans: $\qquad$ ${ }^{\circ}$
9. In the figure below, XOY and POQ are straight lines.
$\angle Z O Y=115^{\circ}$.

Find $\angle \mathrm{y}$.


Ans: $\qquad$ $\circ$
10.

The figure below, not drawn to scale, is made up of 5 equilateral triangles. Each side of the triangle is 4 cm . The height of each triangle is 3 cm . Find the total area of the 5 triangles.


4 cm

For questions 11 to 18, show your working clearly in the space provided for each question and write your answers in the spaces provided. The number of marks available is shown in brackets [ ] at the end of each question or part-question. (30 marks)
11. Aaron, Billy and Charlie have some marbles. Aaron and Billy have a total of 19 marbles. Billy and Charlie have a total of 24 marbles. If Aaron and Charlie have a total of 33 marbles, how many marbles does Charlie have?

Ans : $\qquad$ [3]
$\qquad$
12. The diagram below is not drawn to scale. $\angle \mathrm{ACB}=126^{\circ}, \angle \mathrm{DCG}=136^{\circ}$.

Find $\angle \mathrm{CAB}$.


Ans:
13. A group of pupils was asked on their choice of the different types of CCA. The pie chart below represents their choice. (The figure is not drawn to scale)
(a) What percentage of the pupils chose Brownies as their CCA?
(b) If 75 pupils chose Band as their CCA, how many more pupils prefer Band to Brownies ?


Ans: (a)
(b)
14. The figure below is made up of a triangle and a square. Find $\angle \mathrm{ABF}$. (The figure is not drawn to scale)


Ans: $\qquad$ [3]
15. Wayne has a piece of ribbon 7 m long.

He cuts it into equal pieces, each $\frac{4}{5} \mathrm{~m}$ long.
(a) How many pieces of $\frac{4}{5} \mathrm{~m}$ will he get?
(b) If he wants to have 26 pieces of $\frac{4}{5} \mathrm{~m}$, how many metres of ribbon does he need? (Give your answer to the nearest metre)

Ans: (a)
(b) $\qquad$
16. The pie chart below shows how Kevin spent his money in the month of June. $A B$ is a straight line.

Study the pie chart carefully and answer the questions that follow.

(a) How much did Kevin spend on food in June?
(b) What fraction of Keith's money did he spend on transport?

Give your answer in the simplest form.

Ans: (a)
(b)
17. The following figures are made up of identical $5-\mathrm{cm}$ squares.


Figure 1


Figure 2


Figure 3

Complete the table below for Figure 4 and Figure 5.

|  | Perimeter | Area |
| :---: | :---: | :---: |
| Figure 1 | $4 \times 5 \mathrm{~cm}=20 \mathrm{~cm}$ | $1 \times 5 \mathrm{~cm} \times 5 \mathrm{~cm}=25 \mathrm{~cm}^{2}$ |
| Figure 2 | $8 \times 5 \mathrm{~cm}=40 \mathrm{~cm}$ | $3 \times 5 \mathrm{~cm} \times 5 \mathrm{~cm}=75 \mathrm{~cm}^{2}$ |
| Figure 3 | $12 \times 5 \mathrm{~cm}=60 \mathrm{~cm}$ | $6 \times 5 \mathrm{~cm} \times 5 \mathrm{~cm}=150 \mathrm{~cm}^{2}$ |
| Figure 4 | $16 \times 5 \mathrm{~cm}=80 \mathrm{~cm}$ | (a) $\square$ |
| Figure 5 | (b) |  |

(c) For a certain figure, its perimeter is 140 cm .
(i) What is the figure number?
(ii) What is the area of the figure?

Ans: (c) (i)
(ii)
18. In a library, $60 \%$ of the books are in English and $15 \%$ of the books are in Chinese. The rest of the books are in Tamil and Malay.
(a) What percentage of the library books are in Tamil and Malay?
(b) If there are 1800 books in English, how many books are in Tamil and Malay?
(c) The number of books in Malay is twice the number of books in Tamil. How many books in the library are in Malay?

Ans: (a)
(b)
(c)

