

Class: VIII

MATHEMATICS

Maximum Marks: 60

Time: $2\frac{1}{2}$ hours.

General Instructions:

1. Section A comprises of 8 questions of 1 mark each.
2. Section B comprises of 5 questions of 2 marks each.
3. Section C comprises of 6 questions of 3 marks each.
4. Section D comprises of 6 questions of 4 marks each.

Section-A

- 1) What is the area of the rectangle of length $4xy$ and breadth $2xy$?
- 2) Find the number of faces of a polyhedron having 6 vertices and 12 edges?
- 3) What is the value of $(5^\circ + 6^\circ + 7^\circ)$?
- 4) What is the lateral surface area of a cube of side 5cm?
- 5) The cost of 5 metres of cloth is ₹450. The cost of 8 metres of the cloth is _____
- 6) The cartesian plane has _____ axes.
- 7) What is the H.C.F. of $2x^2y$ and $3xy^2$?
- 8) If the number $5a12$ is divisible by 9, then $a =$ _____.

Section-B

- 9) Using identities evaluate: $(61)^2$.
- 10) i) How are prisms and cylinders alike.
ii) How many vertices does a triangular prism have?
- 11) Find the area of a rhombus whose diagonals are 12cm and 9.2 cm.

12) Factorise: $49y^2 + 48yz + 36z^2$.

13) Find the value of the letters and give reasons for the steps involved.

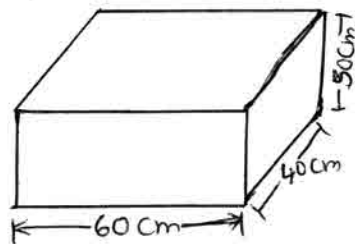
$$\begin{array}{r} \downarrow \quad 3A \\ + 25 \\ \hline \underline{B2} \end{array}$$

Section - C

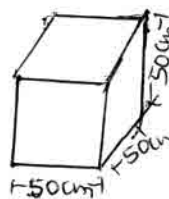
14) Find the volume of cuboid whose dimensions are $(x^2 - 2)$, $(2x + 2)$ and $(x - 1)$.

15) Simplify: $\frac{3^{-5} \times 10^{-5} \times 125}{5^{-7} \times 6^{-5}}$

16) There are two cuboidal boxes as shown in the following figures. Which box requires the lesser amount of material to make?



(a)



(b)

17) Factorise: $x^8 - y^8$.

18) Suppose 2kg of sugar contains 9×10^6 crystals. How many sugar crystals are there in i) 5kg of sugar ii) 1.2kg of sugar?

19) In a two digit number the units digit is four times the tens digit and the sum of the digits is 10.

Find the numbers.

section-D

- 20) i) Find the value of the expression $(81x^2 + 16y^2 - 72xy)$,
when $x = \frac{2}{3}$ and $y = \frac{3}{4}$.
- ii) If $a=2$ and $b=5$, then verify $(a+b)^2 = a^2 + b^2 + 2ab$.
- 21) Express the following numbers in standard form:
- i) 0.00000000000085
- ii) 6050000000000000
- 22) A cylindrical tank has a capacity of 5632 m^3 . If the diameter of its base is 16 m . Find its depth.
- 23) i) If 56 men can do a piece of work in 42 days.
How many men will do it in 14 days?
- ii) If x and y vary inversely as each other and $x=10$
when $y=6$. Find y , when $x=15$.
- 24) i) Factorise: $15x^2 - 26x + 8$
- ii) If $a=2$ and $b=1$, then verify that $(a-b)^2 = a^2 + b^2 - 2ab$.
- 25) i) Plot the vertices $A(-3,0)$, $B(3,0)$ and $C(0,4)$ of triangle
ABC on a graph sheet.
- ii) From above question write the co-ordinate points lies on
x-axis and y-axis?

* ALL THE BEST *