CLASS: $8^{\text {th }}$ Standard
Max Marks :40
SUBJECT -MATHEMATICS
Time :2Hours
I. Four alternatives are given for each of the following questions. choose the correct
answer along with the alphabet :
$20 \times 1=20$

1. The symbol of cube root is $\qquad$
a) $\sqrt[3]{ }$
b) $\sqrt[5]{ }$
c) $\sqrt[2]{ }$
d) $\sqrt[4]{ }$
2. $a^{m} \times a^{n}=$ $\qquad$
a) $a^{m-n}$
b) $a^{m+n}$
C ) $a^{m x n}$
d) $(a X b)^{m}$
3. Curved surface area of cylinder is $\qquad$
a) $\pi r h$
b) $1 \times b$
c) $\pi r^{2} \mathrm{~h}$
d) $2 \pi r h$
4. $\qquad$ is the 3 Dimensional solid in the following
a) cuboid
b) square
c) circle
d) triangle
5. If $x$ and $y$ are directly proportional , then which of the following is correct ?
a) $x+y=$ constant
b) $x-y=$ constant
c) $x y=$ constant
d) $\frac{x}{y}=$ constant
6. The factors of $x^{2}-4$ are $\qquad$
a) $(x+2)(x-2)$
b) $(x+2)(x+2)$
c) $\left(x^{2}+2\right)\left(x^{2}-2\right)$
d) $((x-2)(x-2)$
7. The value of $a^{0}$ $\qquad$
a) -1
b) 1
c) a
d) 0
8. $\qquad$ .gives the number of times that a particular entry occur
a) class interval
b) width
c) raw data
d) frequency
9. A boy runs 1 km in 10 minutes. How long will he take to run 600 m
a) 2 minutes
b) 3 minutes
c) 4 minutes
d) 6 minutes
10. What are the co-ordinates of a point whose ' $x$ ' co-ordinate is 0 and $y$ co-ordinate is 1
a) $(0,1)$
b) $(0,0)$
c) $(1,0)$
d) $(1,1)$
11. The factorization of $12 x+48$ is
a) $12(x+48)$
b) $12(x+4)$
d) $12(4 x+1)$
d) $\times(12+48$
12.The Euler's formula is $\qquad$
a) $F-V+E=2$
b) $F+V+E=2$
c) $F+V-E=2$
d) $F-V+E=2$
$13.12 \%$ of 480 is $\qquad$
a)4
b) 480
c) 12
d) 40
12. The volume of cube of side 5 cm is. $\qquad$
a) $125 \mathrm{~cm}^{3}$
b) $25 \mathrm{~cm}^{3}$
c) $125 \mathrm{~cm}^{2}$
d) $15 \mathrm{~cm}^{3}$
15.The name of the solid is $\qquad$

a)cone
b)cylinder
c) cuboid
d)cube
13. $\qquad$ .number of faces does cube have
a)4
b) 8
c) 6
d) 3
14. The standard form of 0.00000000875 is $\qquad$
a) $8.75 \times 10^{-8}$
b) $8.75 \times 10^{-9}$
c) $8.75 \times 10^{9}$
d) $8.75 \times 10^{8}$
15. When a coin is tossed , the possible outcomes is $\qquad$
a)2
b) 3
c) 0
d) 1
19.By what number should 81 be divided to get a perfect cube?
a) 9
b) 7
c) 6
d) 3
20.The percentage of $1: 4$ is $\qquad$
a) $75 \%$
b) $50 \%$
c) $25 \%$
d) $100 \%$

II Solve the following :
21.Factorise the expressions $x^{2}-4 x-12$

Or
Factorise the expressions and divide them as directed $\left(y^{2}+7 y+10\right) \div(y+5)$
22.A car travels 2 hours to reach destination by travelling at a speed of $60 \mathrm{~km} / \mathrm{h}$. How long will it take the car travels at the speed of $80 \mathrm{~km} / \mathrm{h}$ ?

Or
Suppose 2 kg of crystals contains $9 \times 10^{6}$ crystals .How many sugar crystals are there in 5 kg of sugar
23.Draw a pie chart showing the information. The table shows the colours preferred by a group of people.

| Colours | Number of people |
| :---: | :---: |
| Blue | 18 |
| Green | 9 |
| Red | 6 |
| Yellow | 3 |
| Total | 36 |

24.A milk tank is in the form of cylinder whose radius is 1.5 m and length is 7 m . Find the quantity of milk in litres that can be stored in the tank?

Or
The diagonal of a quadrilateral shaped field is 24 m and perpendiculars dropped on it from the remaining opposite vertices are 8 m and 13 m . Find the area of the field

25. Find compound interest when a sum of Rs 10800 is invested for 3 years at $8 \frac{1}{2} \%$ per annum compound annually ?

## IV. Solve the following question

$3 \times 2=06$
26.Simplify $\frac{512 X 9^{3} X 4}{27 X 6^{3} X 8^{2}}$

Or
When a die is thrown once find the probability of
a) a prime number
b)a number less than 5
c) a number greater than 6
27. A VCR and TV were bought for 8000 each . The shopkeeper made a loss of $4 \%$ on the VCR and a profit of $8 \%$ on TV. Find the gain or loss percent on the whole transaction?

## V .Solve the following question

$1 \times 4=04$
28. Draw a graph for the following tables with suitable scales on the axes .

Distance travelled by a car

| Time (in hours) | 6 a.m. | 7 a.m. | 8 a.m. | 9 a.m. |
| :--- | :---: | :---: | :---: | :---: |
| Distances (in km) | 40 | 80 | 120 | 160 |

a) How much distance did the car cover during the period 7.30a.m to 8 a.m.
b) What was the time taken when a car had covered a distance of 100 km since it's start?

