Subject: Mathematics
Date : 28/09/2022

## General Instructions:

i) All questions are compulsory.
ii) This question paper contains 16 questions.
iii) Questions $1-9$ in Section A are very short type questions carrying 1 mark each.
iv) Questions $10-16$ in Section B are short-answer type questions carrying 2 marks each.
v) Questions $17-21$ in Section $C$ are short -answer type questions carrying 3 marks each.
vi) Question $22-24$ in Section D is long-answer type question carrying 4 marks.

## SECTION - A

1. What will be the product if -80 is multiplied by -15 ?
2. Reduce $\frac{84}{144}$ to its lowest term.
3. What should be added to 4.75 to get 8.47 ?
4. Out of seven days in a week, what is the probability that today is Tuesday?
5. Write the multiplicative inverse of $\frac{-1}{3}$.
6. In $\frac{p}{q}$ both p and q are negative so it is called negative rational number. State whether the statement is True/False Correct the statement if it is false.
7. Draw two angles that are complementary, where one of the angle is $65^{\circ}$.
8. If $7.645 \times 4.8=36.696$, then $76.45 \times 0.48=$ $\qquad$ .
9. Subodh has written the measures of two angles $\angle$ a and $\angle$ b on his drawing shown below. Are his measures of angles correct? If you think, he is wrong give reason.


## SECTION - B

10. The table given below shows the record of low temperature in Manali, for January 1-7 of a particular year. Arrange the temperature from the coldest to the warmest on the number line.

| Day | Jan1 | Jan 2 | Jan 3 | Jan 4 | Jan 5 | Jan 6 | Jan 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Temperature | -4 | -7 | 6 | 5 | -1 | -6 | 1 |

11. a) Find the supplement of an angle of $68^{\circ}$.
b) Find the angle which is equal to its complement.
12. 

Find:
a) $\frac{1}{5}$ of a rupee
b) $\frac{2}{3}$ of an hour
13. Following numbers of goals were scored by a team in a series of 11 matches.
$5,3,0,1,2,4,3,4,5,3,3$.
Find the mean, median and mode of the given data.
14. In the given figure $1 \| \mathrm{m}$, Find the values of $\mathrm{a}, \mathrm{b}$ and c .

15. A bike is moving at an average speed of $\frac{6}{5} \mathrm{~km} / \mathrm{h}$. How much distance it will cover in $\frac{5}{2}$ hour?
16. If $a=\frac{2}{5}, b=\frac{3}{4}$, find $(a+b) \div(a-b)$.

## SECTION - C

17. a) Find the equivalent rational number of $3 \frac{8}{25}$.
b) The sum of two rational number is $\frac{-3}{8}$. If one number is $\frac{3}{16}$, then find the other.
18. Simplify:- $9-[4+\{3-(-8-6)-(-3+2)\}]$
19. List three rational numbers between $\frac{-2}{3}$ and $\frac{-1}{6}$. Represent the given rational numbers on the number line.
20. a) Jagdish bought 5 dozens of strawberries. He found $\frac{2}{5}$ of strawberries are damaged. What is the number of undamaged strawberries?
b) Prakash buys 3 liters of oil and 2 liters of ghee. If the oil costs ₹ 132.3 per liter and ghee costs ₹ 282.26 , then how much does Prakash spend on oil and ghee?
21. The result of pass percentage of class X and XII in CBSE examination for 3 years are given in the following table:

| Year | $2019-2020$ | $2020-2021$ | $2021-2022$ |
| :---: | :---: | :---: | :---: |
| X | 75 | 95 | 85 |
| XII | 80 | 85 | 95 |

Draw the double bar graph to represent the data

## SECTION - D

22. a) In a freezer, the temperature falls by $5^{\circ} \mathrm{C}$ every 4 minutes. In how much time will the water kept at $30^{\circ} \mathrm{C}$ freeze into ice?
b) Verify that $(x \times y)-(x+z)=x(y-z)$, where $x=5, y=2$ and $z=0$.
23. a) Evaluate: 23.5 of $4.5+45.3$ of 6.5
b) Divide 4.8432 by 0.8 and then multiply it into 0.01 .
24. In the adjoining figure, a transversal line 1 cuts two parallel lines a and d.
a) If $\angle 1$ is $120^{\circ}$ then find P and Q .
b) Identify pair of alternate exterior angle, pair of adjacent angles and Interior angles on the dame

