Application No: _____   **CLASS IX**   **Name:**_____

Model Test Paper – 2022-23

MATHEMATICS

Max. Marks: 25   Time: 30minutes

Q.1   Fill in the blanks: [4]

a) $\left(3^5 \times 3^4\right) \div 3^{13}$ = ...

b) $\left(2a^2 + 4ab + b^2\right) - \left(a^2 - 3ab - b^2\right) =$ ....

c) $\sqrt{1764}$ = ...

d) Multiplicative inverse of $\dfrac{a}{b}$ is ....

Q.2   State whether the following statements are true or false: [4]

a) The measure of the supplement of 160° is 60°.   [   ]
b) Radius = 2 x Diameter   [   ]
c) The area of a square field is 108900 sqm, then the length of its side 33m. [   ]
d) Square of a negative integer is a negative integer.   [   ]

Q.3   Choose the correct alternative to make the given statement true: [5]

i) The value of x in $\dfrac{-20}{x} = \dfrac{-4}{3}$

a) 12   b) 18   c) 15   d) 50.

ii) If x is an odd number, then the next odd number is

a) $x+1$ b) $x+3$ c) $x-3$ d) $x+2$.

iii) Factorize $9x^2 - 24x + 16$

a) $\left(3x\right)^2 - 4^2$ b) $3x^2 + 4^2$ c) $\left(3x+4\right)^2$ d) $\left(3x-4\right)^2$

iv) Two adjacent angles of a parallelogram are $\left(2x+25\right)°$ and $\left(3x-5\right)°$ .The value of x is

a) 32   b) 28   c)36   d)42.

v) A die is thrown. What is the probability of getting 6.

a) 1   b) $\dfrac{1}{6}$ c) $\dfrac{6}{1}$ d) $\dfrac{1}{5}$

Q.4   Solve the following: [6 ×2= 12]

i) Solve :- $\dfrac{z(5z^2 - 80)}{(z+4)}$

ii) The angles of a quadrilateral are in the ratio of 2 : 2 : 3 : 5. Find the measures of all the angles.

iii) If the dimensions of a cuboid are in the ratio **1: 2: 3** and its total surface area is 88 m², find its dimensions.

iv) Simplify: a) $m^4 - 256$ b) $\left(\dfrac{3}{2}m + \dfrac{2}{3}n\right)\left(\dfrac{3}{2}m - \dfrac{2}{3}n\right)$

v) Solve the equation: $\dfrac{y + 6}{4} + \dfrac{y - 3}{5} = \dfrac{5y - 4}{8}$.

vi) Find the cube root of 2744.

---THE END ---