

REVISION TEST 01 : NUMBER SYSTEM
CLASS: IX : MATHEMATICS

M.M. 30 Marks

T.T. 1 hr

SECTION – A(2 marks each)

1. Simplify: $64^{\frac{-1}{3}} \left[64^{\frac{1}{3}} - 64^{\frac{2}{3}} \right]$
2. Show that 0.23535353..... can be expressed in the form of $\frac{p}{q}$, where p and q are integers and $q \neq 0$.
3. Simplify: $\left(8^{\frac{1}{3}} \times 16^{\frac{1}{3}} \right) \div 32^{\frac{-1}{3}}$
4. Rationalize the denominator of $\frac{3-2\sqrt{2}}{3+2\sqrt{2}}$.

SECTION – B(3 marks each)

5. Simplify $\frac{4+\sqrt{5}}{4-\sqrt{5}} + \frac{4-\sqrt{5}}{4+\sqrt{5}}$ by rationalizing the denominator.
6. Simplify $\frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}+\sqrt{2}} + \frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-\sqrt{2}}$ by rationalizing the denominator.

SECTION – C(4 marks each)

7. If $\frac{3+\sqrt{7}}{3-\sqrt{7}} = a+b\sqrt{7}$, then find the value of a and b.
8. Represent the real number $\sqrt{2}, \sqrt{3}, \sqrt{5}$ on a single number line.
9. Simplify: $\frac{7\sqrt{3}}{\sqrt{10}+\sqrt{3}} - \frac{2\sqrt{5}}{\sqrt{6}+\sqrt{5}} - \frac{3\sqrt{2}}{\sqrt{15}+3\sqrt{2}}$
10. Visualize $\sqrt{4.26}$ on the number line, using successive magnification upto 4 decimal places.