BHARATH COACHING CENTRE

9th CBSE	NUMBER SYSTEM	Total: 50
MATHS		Time: 2 hrs.

SECTION – A $1 \times 5 = 5$

1. The number $\sqrt{7}$ is _____.
2. Every point on a number line represents_____.
3. The number of consecutive zeros in $2^3 \times 3^4 \times 5^4 \times 7^x$ _____.
4. $0.3\overline{2}$ When expressed in the form $\frac{p}{q}$ _____.
5. The value of $0.\overline{23} + 0.\overline{22}$ is _____.

SECTION – B $2 \times 5 = 20$

6. Express the following rational number as decimals $\frac{-22}{13}$.
7. Express the following decimals in the form $\frac{p}{q}$: $0.\overline{585}$
8. If $\frac{1}{7} = 0.\overline{142857}$, write the decimal expression of $\frac{2}{7}, \frac{3}{7}, \frac{4}{7}, \frac{5}{7}$ & $\frac{6}{7}$ without actually doing the long division.
9. Express the following mixed recurring decimals in the form $\frac{p}{q}$: $15.7\overline{12}$
10. Find two irrational numbers lying between $\sqrt{2}$ &$\sqrt{3}$.
11. Whether the following number are rational or irrational: $(\sqrt{2} + 2)^2$
12. Represent $\sqrt{9.3}$ on the number line.
13. Removing radical sign and negative indices wherever they occur: $(\sqrt[3]{8})^{-1/2}$
14. If x, y, z are positive real numbers show that $\sqrt{x^{-1}y}, \sqrt{y^{-1}z}, \sqrt{z^{-1}x} = 1$.
15. Find the value of x $2^{5x} \div 2^x = \sqrt[5]{2^{20}}$

SECTION – C $5 \times 5 = 25$

16. Express 0.999999…. in the form $\frac{p}{q}$, where p and q are integer and q≠0.
17. Find the value of x & y : $(\sqrt{x})^{-2/3}\sqrt{y^4} \div \sqrt{xy^{-1/2}}$
18. Find the value of a & b : $\frac{\sqrt{5}+\sqrt{3}}{\sqrt{5}-\sqrt{3}} = a + b\sqrt{15}$
19. Simplify : $\frac{\sqrt{5}-2}{\sqrt{5}+2} - \frac{\sqrt{5}+2}{\sqrt{5}-2}$
20. Visualize $4.\overline{26}$ on the number line, up to 4 decimal places.