

VAISHALI EDUCATION POINT

(Quality Education Provider)
Mathematics Practice Paper
Topic - Number System

M.M-50
Time-2 hrs

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Q1. Find five rational numbers between $\frac{3}{5}$ and $\frac{4}{5}$. (5m)

Q2. Give the decimal representation for $\frac{1}{17}$. (5m)

Q3. Express $0.353535\dots$ in p/q form. (5m)

Q4. Prove that root of 2 is not a rational number. (5m)

Q5. Show the root of 10.5 on the number line. (5m)

Q6. If –

$$9^n \times 3^2 \times (3^{-n/2})^{-2} - (27)^n$$

$$\text{-----} = \frac{1}{27}$$

$$3^{3m} \times 2^3$$

Prove that $m - n = 1$.

Q7. If $x = 1 - \sqrt{2}$ find the value of $(x - \frac{1}{x})^3$ (5m)

Q8. If $x = \frac{\sqrt{3}}{2}$ find the value of $4x^3 + 2x^2 - 8x + 7$ (5m)

Q9. $\sqrt{2} = 1.414\dots$ find the value of $\frac{\sqrt{3}}{\sqrt{6}}$ (5m)

Q10. Find whether the following statements are true or false: (5m)

- 1) Every real number is either rational or irrational.
- 2) $\frac{22}{7}$ is an irrational number.
- 3) Irrational numbers cannot be represented by points on the number line.
- 4) Rationalizing factor of $\frac{1}{\sqrt{a}}$ is \sqrt{a}
- 5) If $x^m = x^n \Rightarrow m = n$