

* Choose the right answer from the given options. [1 Marks Each]

[10]

- The value of $\sqrt{20} \times \sqrt{5}$ is :
(A) 10 (B) $4\sqrt{5}$ (C) $2\sqrt{5}$ (D) $20\sqrt{5}$
- Write the correct answer in the following:
 $\sqrt[4]{\sqrt[3]{2^2}}$ equals.
(A) $2^{-\frac{1}{6}}$ (B) 2^{-6} (C) $2^{\frac{1}{6}}$ (D) 2^6
- If $\sqrt{2} = 1.414$, then the value of $\sqrt{6} - \sqrt{3}$ upto three place of decimal is :
(A) 0.235 (B) 0.707 (C) 1.414 (D) 0.471
- The rationalisation factor of $\frac{1}{(2\sqrt{3}-\sqrt{5})}$ is :
(A) $\sqrt{5} - 2\sqrt{3}$ (B) $\sqrt{3} + 2\sqrt{5}$ (C) $(\sqrt{3} + \sqrt{5})$ (D) $\sqrt{12} + \sqrt{5}$
- $(125)^{-\frac{1}{3}} = ?$
(A) 5 (B) -5 (C) $\frac{1}{5}$ (D) $-\frac{1}{5}$
- The value of $\left[(81)^{\frac{1}{2}}\right]^{\frac{1}{2}}$ is:
(A) 3 (B) 9 (C) -3 (D) $\frac{1}{3}$
- Write the correct answer in the following:
 $\frac{1}{\sqrt{9}-\sqrt{8}}$ is equal to
(A) $\frac{1}{2}(3 - 2\sqrt{2})$ (B) $\frac{1}{3+2\sqrt{2}}$ (C) $3 - 2\sqrt{2}$ (D) $3 + 2\sqrt{2}$
- The rational number not lying between $\frac{3}{5}$ and $\frac{2}{3}$ is:
(A) $\frac{50}{75}$ (B) $\frac{46}{75}$ (C) $\frac{47}{75}$ (D) $\frac{49}{75}$
- The value of $\frac{2}{\sqrt{5}-\sqrt{3}}$ is:
(A) $\frac{1}{\sqrt{5}-\sqrt{3}}$ (B) $\sqrt{5} - \sqrt{3}$ (C) $\frac{1}{\sqrt{5}+\sqrt{3}}$ (D) $\sqrt{5} + \sqrt{3}$
- An irrational number between $\sqrt{2}$ and $\sqrt{3}$ is
(A) $\sqrt{2} + \sqrt{3}$ (B) $\sqrt{2} \times \sqrt{3}$ (C) $\sqrt{\sqrt{2} + 3}$ (D) $\sqrt{\sqrt{2} \times \sqrt{3}}$

* Answer the following short questions. [2 Marks Each]

[6]

- Find three different irrational numbers between the rational numbers $\frac{5}{9}$ and $\frac{9}{11}$.

- Simplify:

$$\left(\frac{\frac{1}{15} \cdot 3}{\frac{1}{9} \cdot 4}\right)^{-6}$$

- Prove that:

$$\sqrt{x^{-1}y} \times \sqrt{y^{-1}z} \times \sqrt{z^{-1}x} = 1.$$

* Answer the following questions. [3 Marks Each]

[9]

- Locate $\sqrt{2}$ on the number line.
- Express the following decimals in the form $\frac{p}{q}$, where p, q are integers and $q \neq 0$.
0.235

- Simplify:

$$\frac{1}{\sqrt{3}+\sqrt{2}} - \frac{2}{\sqrt{5}-\sqrt{3}} - \frac{3}{\sqrt{2}-\sqrt{5}}$$
