Visit QB365-SLMS - https://www.qb365.in/slms/ Complete Questions and Answers

Questions:

4 Marks

1. Find two irrational numbers between 2 and 2.5.
2. Evaluate: $\frac{40}{2\sqrt{10}+\sqrt{20}+\sqrt{40}-2\sqrt{5}}$ when it is given that $\sqrt{10} = 3.162$
3. If $a = 7 - 4\sqrt{3}$, find the value of $\sqrt{a} + \frac{1}{\sqrt{a}}$
4. If x = 4-√15, then find the value of $\left(x + \frac{1}{x}\right)^2$

3 Marks

5. Find the sum of 0.0333... and 0.444.....
6. If a and b are rational numbers and $\frac{2+\sqrt{3}}{2-\sqrt{3}} = a + b\sqrt{3}$, find the value of a^2+b^2.
7. Find the sum of $2.\overline{3} \quad and \quad 4.\overline{15}$.
8. Simplify: $\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \frac{2}{\sqrt{3}+\sqrt{5}}$
9. If √2 = 1.414 and √3 = 1.732, then calculate $\frac{4}{3\sqrt{3}-2\sqrt{2}} + \frac{3}{3\sqrt{3}-2\sqrt{2}}$

2 Marks

10. If $a = \frac{\sqrt{2}+1}{\sqrt{2}-1}$ and $b = \frac{1}{a}$, find the value of $a^2 + b^2$
11. Find the values of a and b, if $\frac{\sqrt{2}+\sqrt{3}}{3\sqrt{2}-2\sqrt{3}} = a + b\sqrt{6}$
12. Represent
    (i) $2\frac{3}{8}$ and
    (ii) $-\left(1\frac{5}{7}\right)$ on a real number line.
13. Express -0.00875 in the form $\frac{p}{q}$, where p and q are integers and q≠0.
14. If 7x = 1, then find the decimal expansion of x.

QB365 Study Material QUESTION BANK 365

Multiple Choice Question

15. Every rational number is:
    (a) a natural number (b) an integer (c) a real number (d) a whole number
16. If $\sqrt{x}$ is an irrational number, then x is:
    (a) rational (b) irrational (c) 0 (d) real
17. The decimal form of 56/1000 is
    (a) 0.56 (b) 0.056 (c) 0.0056 (d) 5.6
18. A number is an irrational if and only if its decimal representation is:
    (a) non-terminating (b) non-terminating and repeating (c) non terminating and non repeating (d) terminating
19. The decimal expansion of $\sqrt{2}$ is
    (a) finite decimal (b) 1.4121 (c) non-terminating recurring (d) non-terminating non-recurring
20. π is:
    (a) a rational number (b) an integer (c) an irrational number (d) a whole number
21. $\left(-2 - \sqrt{3}\right)\left(-2 + \sqrt{3}\right)$ when simplified is:
    (a) positive and irrational (b) positive and rational (c) negative and irrational (d) negative and rational
22. $\left(5 + \sqrt{8}\right) + \left(3 - \sqrt{2}\right) - \left(\sqrt{2} - 6\right)$ when simplified is:
    (a) positive and irrational (b) negative and irrational (c) positive and rational (d) negative and rational
23. Simplified value of $(25)^{\frac{1}{7}} \times (5)^{\frac{1}{7}}$ is:
    (a) 25 (b) 3 (c) 1 (d) 5
24. $\sqrt[3]{\frac{54}{250}}$ equals:
    (a) $\frac{9}{25}$ (b) $\frac{3}{5}$ (c) $\frac{27}{125}$ (d) $\frac{\sqrt[3]{2}}{5}$