

Q.1 Multiple Choice Questions. Choose the correct answer.

1. $(27x^{-1})^{\frac{-2}{3}} = \underline{\hspace{2cm}}$
 - (a) $\frac{\sqrt[3]{x^2}}{9}$
 - (b) $\frac{\sqrt{x^3}}{9}$
 - (c) $\frac{\sqrt[3]{x^2}}{8}$
 - (d) $\frac{\sqrt{x^3}}{8}$
 2. Write $\sqrt[7]{x}$ in exponential form
 - (a) x
 - (b) x^7
 - (c) $x^{\frac{1}{7}}$
 - (d) $x^{\frac{7}{2}}$
 3. Write $4^{\frac{2}{3}}$ with radical sign....
 - (a) $\sqrt[3]{4^2}$
 - (b) $\sqrt{4^3}$
 - (c) $\sqrt[2]{4^3}$
 - (d) $\sqrt{4^6}$
 4. In $\sqrt[3]{35}$ the radicand is
 - (a) 3
 - (b) $\frac{1}{3}$
 - (c) 35
 - (d) None of these
 5. $\left(\frac{25}{16}\right)^{\frac{-1}{2}} = \underline{\hspace{2cm}}$
 - (a) $\frac{5}{4}$
 - (b) $\frac{4}{5}$
 - (c) $-\frac{5}{4}$
 - (d) $-\frac{4}{5}$
 6. The conjugate of $5 + 4i$ is _____
 - (a) $-5 + 4i$
 - (b) $-5 - 4i$
 - (c) $5 - 4i$
 - (d) $5 + 4i$
 7. The value of i^9 is _____
 - (a) 1
 - (b) -1
 - (c) i
 - (d) $-i$
 8. Every real number is _____
 - (a) A positive integer
 - (b) A rational number
 - (c) A negative integer
 - (d) A complex number
 9. Real part of $2ab(i + i^2)$ is _____
 - (a) $2ab$
 - (b) $-2ab$
 - (c) $2abi$
 - (d) $-2abi$
 10. Imaginary part of $-i(3i + 2)$ is _____
 - (a) -2
 - (b) 2
 - (c) 3
 - (d) -3
 11. Which of the following sets have the closure property w.r.t. addition _____
 - (a) $\{0\}$
 - (b) $\{0, -1\}$
 - (c) $\{0, 1\}$
 - (d) $\left\{1, \sqrt{2}, \frac{1}{2}\right\}$
 12. Name the property of real numbers used in $\left(\frac{-\sqrt{5}}{2}\right) \times 1 = \frac{-\sqrt{5}}{2}$
 - (a) Additive identity
 - (b) Additive Inverse
 - (c) Multiplicative identity
 - (d) Multiplicative Inverse
 13. If $x, y, z \in \mathbf{R}$ $z < 0$ then $x < y \Rightarrow$
 - (a) $xz < yz$
 - (b) $xz > yz$
 - (c) $xz = yz$
 - (d) none of these
 14. If $a, b \in \mathbf{R}$ then only one of $a = b$ or $a < b$ or $a > b$ holds is called...
 - (a) Trichotomy property
 - (b) Transitive property
 - (c) Additive property
 - (d) Multiplicative property
 15. A non-terminating, non-recurring decimal represents:
 - (a) A natural number
 - (b) A rational number
 - (c) An irrational number
 - (d) A prime number
- Additional MCQ**
16. The union of the set of rational numbers and irrational numbers is known as set of _____
 - (a) Rational number
 - (b) Irrational
 - (c) Real number
 - (d) Whole number

17. $\sqrt{3} \cdot \sqrt{3}$ is a ____ number.
 (a) Rational (b) Irrational
 (c) Real (d) None
18. $\sqrt[3]{ab} =$ ____
 (a) $\sqrt[3]{a} \sqrt[3]{b}$ (b) $\sqrt{a} \sqrt{b}$
 (c) $\sqrt{a} \sqrt{b}$ (d) $\sqrt{a} \sqrt[3]{b}$
19. $\sqrt[5]{-8} =$
 (a) $(-8)^{\frac{1}{5}}$ (b) $(-8)^5$
 (c) (-8) (d) $(8)^{\frac{1}{5}}$
20. The value of i^{10} is:
 (a) -1 (b) 1
 (c) $-i$ (d) i
21. The conjugate of $2 + 3i$ is ____
 (a) $2 - 3i$ (b) $-2 - 3i$
 (c) $-2 + 3i$ (d) $2 + 3i$
22. Real part of $(-1 + \sqrt{-2})^2$ is:
 (a) -1 (b) $-2\sqrt{2}$
 (c) 1 (d) $2\sqrt{2}$
23. Imaginary part of $(-1 + \sqrt{-2})^2$ is
 (a) -1 (b) $-2\sqrt{2}$
 (c) 1 (d) $2\sqrt{2}$
24. $\frac{P}{q}$ is a/an.....number
25.
 (a) irrational (b) rational
 (c) natural (d) whole
26. The value of i (iota) is ____
 (a) $\sqrt{-1}$ (b) -1
 (c) +1 (d) $(-1)^2$
27. In $-2+3i$, 3 is called ____
 (a) imaginary part (b) real part
 (c) negative part (d) complex number
28. The set of natural numbers is.....
 (a) $\{0,1,2,3,\dots\}$ (b) $\{2,4,6,\dots\}$
 (c) $\{1,2,3,\dots\}$ (d) $\{2,3,5,7,\dots\}$
29. π , e , $\sqrt{2}$, $\sqrt{3}$ and $\sqrt{5}$ are called...
 (a) irrational numbers
 (b) rational number

- (c) natural numbers (d) real number
30. If $x+iy+1=4-3i$, then
 (a) $x=4$, $y=-3$
 (b) $x=3$, $y=3$
 (c) $x=3$, $y=-3$
 (d) $x=5$, $y=-3$
31. $\frac{p}{q}$ form of $0.\bar{3}$ is _____.
 (a) $\frac{3}{10}$ (b) $\frac{1}{3}$
 (c) 0.33 (d) $\frac{10}{3}$

1	a	2	c	3	a	4	c	5	b
6	c	7	c	8	d	9	b	10	a
11	a	12	c	13	b	14	a	15	c
16	c	17	c	18	a	19	a	20	a
21	a	22	a	23	b	24	a	25	a
26	a	27	c	28	a	29	c	30	b