

SECTION-A

Note:

- 1) Attempting all MCQs is compulsory. This paper along with the OMR sheet must be returned to the superintendent after due time.
- 2) Fill the circle (A)(B)(C)(D), which one is correct with blue or black ball in separate OMR Sheet like.
- 3) If more than one circle in the OMR sheet is filled then no credit will be given to such answer.

- I.i. Parallelograms having same base and same altitude are _____.
- (A) Congruent (B) Equal in Area (C) Similar (D) All of the above
- ii. Which of the following represents the sides of a triangle?
- (A) 3,4 and 7 (B) 3,4 and 8 (C) 3,4 and 5 (D) 3,4 and 1
- iii. $(a-b)^3 =$ _____
- (A) a^3-b^3 (B) $a^3-3ab(a-b)-b^3$ (C) $a^3+3ab(a-b)-b^3$ (D) $a^3-3ab(a+b)-b^3$
- iv. When a polynomial $P(x)$ of degree $n \geq 1$ is divided by $x-r$, then remainder, $R =$ _____?
- (A) $P(n)$ (B) $P(1)$ (C) $P(x)$ (D) $P(r)$
- v. Factorization of $a^2-b^2+10b-25$ is.
- (A) $(a+b-5)(a-b+5)$ (B) $(a+b-5)(a+b-5)$ (C) $(a-b-5)(a+b+5)$ (D) $(a+b-5)(a-b-5)$
- vi. There are _____ methods for finding the square root of an algebraic expression.
- (A) 1 (B) 2 (C) 3 (D) 4
- vii. Which one is the solution set of $|x|=0$.
- (A) $\{0\}$ (B) $\{\}$ (C) $\{1\}$ (D) $\{-1\}$
- viii. In an order pair (a,b) , x-coordinate is called _____.
- (A) Ordinate (B) Abscissa (C) Origin (D) None of these
- ix. If $A^t = -A$ then square matrix A is called _____.
- (A) Symmetric (B) Skew-Symmetric (C) Diagonal (D) None of these
- x. For what value of d is the 2×2 matrix $\begin{bmatrix} 2 & 1.5 \\ 2 & d \end{bmatrix}$ not invertible?
- (A) -0.6 (B) 0 (C) 0.6 (D) 3
- xi. $3\sqrt{-64} =$ _____.
- (A) -4 (B) 4 (C) -8 (D) $2^{\frac{1}{2}}$
- xii. Conjugate of a complex number $Z = -8 - 3i$ is.
- (A) $8-3i$ (B) $.8+3i$ (C) $\frac{1}{-8-3i}$ (D) $-8+3i$
- xiii. Base of Natural log is _____.
- (A) 10 (B) e (C) π (D) 1
- xiv. Multiplication of $\frac{m-2}{3m+9}$ & $\frac{2m+6}{2m-4}$ is equal to?
- (A) $\frac{2}{5}$ (B) $\frac{3}{(3m+9)^2}$ (C) $2m^2-12$ (D) $\frac{1}{3}$
- xv. A line which is perpendicular to a line segment at its mid-point is called ^{a/}an _____.
- (A) Perpendicular bisector (B) Median (C) Altitude (D) Angle bisector