

(Objective)

(Group-I)

Note

Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

1.1 The diagonals of a parallelogram _____ each

other.

- (A) bisect (B) trisect
(C) bisect of right angle (D) divide

2 A triangular region is the _____ of a triangle and its interior.

- (A) intersection (B) union
(C) sum (D) difference

3 Symbol used for congruent is _____.

- (A) \cong (B) \sim
(C) $>$ (D) \leq

4 Bisection means to divide into _____ equal part/parts.

- (A) 3 (B) 4
(C) 2 (D) 1

5 In a parallelogram, opposite angles are

- (A) smaller (B) equal
(C) greater (D) concurrent

6 In a triangle, there can be _____ right angle/angles.

- (A) 4 (B) 3
(C) 2 (D) 1

7 A triangle having all sides equal, is called

- (A) isosceles (B) scalene
(C) equilateral (D) right triangle

8 $x=0$ is a solution of the inequality

- (A) $x > 0$ (B) $3x + 5 < 0$
(C) $x + 2 < 0$ (D) $x - 2 < 0$

9 If $x=2$, $y=2x+1$ then y is equal to

- (A) 2 (B) 3
(C) 4 (D) 5

10 H.C.F of $a^2 - b^2$ and $a^3 - b^3$ is

- (A) $a - b$ (B) $a + b$
(C) $a^2 + ab + b^2$ (D) $a^2 - ab + b^2$

11 Find m so that $x^2 + 4x + m$ is a complete square

- (A) 8 (B) -8
(C) 4 (D) 16

12 $\log p - \log q =$ _____

- (A) $\log\left(\frac{q}{p}\right)$ (B) $\log(p - q)$
(C) $\frac{\log p}{\log q}$ (D) $\log\left(\frac{p}{q}\right)$

13 $\frac{1}{a - b} - \frac{1}{a + b}$ is equal to

- (A) $\frac{2a}{a^2 - b^2}$ (B) $\frac{2b}{a^2 - b^2}$
(C) $\frac{-2a}{a^2 - b^2}$ (D) $\frac{-2b}{a^2 - b^2}$

14 The conjugate of $5 + 4i$ is

- (A) $-5 + 4i$ (B) $-5 - 4i$
(C) $5 - 4i$ (D) $5 + 4i$

15 Product of $\begin{bmatrix} x & y \\ 2 & 1 \end{bmatrix}$ is equal to

- (A) $[2x + y]$ (B) $[x - 2y]$
(C) $[2x - y]$ (D) $[x + 2y]$