

(Objective)

(Group-I)

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. Putting or filling two or more circles will result in zero mark in that question.

1 The value of  $i^9$  is

- (A) 1 (B) -1  
(C)  $i$  (D)  $-i$

2  $(\sqrt{a} + \sqrt{b})(\sqrt{a} - \sqrt{b})$  is equal to

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

3 The square root of  $a^2 - 2a + 1$  is

- (A)  $\pm(a-1)$  (B)  $a+1$   
(C)  $a+1$  (D)  $\pm(a-1)$

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

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

5 If  $\begin{vmatrix} 2 & 6 \\ 3 & x \end{vmatrix} = 0$  then  $x$  is equal to

- (A) 9 (B) -6  
(C) 6 (D) -9

6  $\log m^n$  can be written as

- (A)  $(\log m)^n$  (B)  $\log(mn)$   
(C)  $n \log m$  (D)  $m \log n$

7 Which ordered pair satisfies the equation  $y=2x$

- (A) (2,1) (B) (2,2)  
(C) (1,2) (D) (0,1)

8 Factors of  $5x^2 - 17xy - 12y^2$  are

- (A)  $(x+4y), (5x+3y)$  (B)  $(x-4y), (5x+3y)$   
(C)  $(x-4y), (5x-3y)$  (D)  $(5x-4y), (x+3y)$

9 If the three altitude of a triangle are congruent then the triangle is \_\_\_\_\_.

- (A) right angled (B) equilateral  
(C) isosceles (D) acute angled

10 Line/lines can be drawn through two points

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

11 The bisectors of the angles of a triangle are \_\_\_\_\_

- (A) concurrent (B) non-concurrent  
(C) perpendicular (D) parallel

12 A triangle having all sides different, is called

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

13 In a parallelogram, opposite angles are \_\_\_\_\_

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

14 Two lines can intersect at \_\_\_\_\_ point/points.

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

15 The area of parallelogram \_\_\_\_\_ base x altitude

- (A)  $>$  (B)  $=$   
(C)  $<$  (D)  $\geq$