

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 Symbol used for 'approximate' is:

- (A)  $\approx$  (B)  $\div$   
 (C)  $=$  (D)  $\cong$

2 A parallelogram has \_\_\_\_\_ right angles.

- (A) 0 (B) 1  
 (C) 2 (D) 3

3 HCF of  $x^2 - 5x + 6$  and  $x^2 - x - 6$  is:

- (A)  $x - 3$  (B)  $x + 2$   
 (C)  $x^2 - 4$  (D)  $x - 2$

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

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

5 One angle on the base of an isosceles triangle is  $30^\circ$ , its vertical angle is:

- (A)  $30^\circ$  (B)  $60^\circ$   
 (C)  $90^\circ$  (D)  $120^\circ$

6 A line segment has \_\_\_\_\_ end points:

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

7 A triangle having all sides different is called:

- (A) Isosceles (B) Scalene  
 (C) Equilateral (D) None of these

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

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

9  $x = 0$  is the solution of the inequality \_\_\_\_\_:

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

10 \_\_\_\_\_ has no unit.

- (A) Ratio (B) Length  
 (C) Area (D) Perimeter

11 Factors of  $a^4 - 4b^4$  are \_\_\_\_\_:

- (A)  $(a - b)(a + b)(a^2 + 4b^2)$   
 (B)  $(a - b)(a + b)(a^2 - 4b^2)$   
 (C)  $(a^2 - 2b^2)(a^2 + 2b^2)$   
 (D)  $(a - 2b)(a^2 + 2b^2)$

12 The value of  $\log\left(\frac{p}{q}\right)$  is:

- (A)  $\frac{\log p}{\log q}$  (B)  $\log p - \log q$   
 (C)  $\log q - \log p$  (D)  $\log^2 p + \log^2 q$

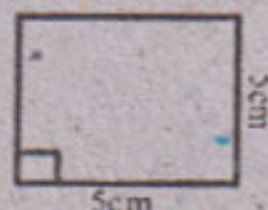
13 Point  $(-3, 3)$  lies in \_\_\_\_\_ quadrant:

- (A) IV (B) III  
 (C) I (D) II

14 The conjugate of  $5 + 4i$  is:

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

15 Area of given figure is:



- (A)  $5 \text{ cm}^2$  (B)  $20 \text{ cm}^2$   
 (C)  $10 \text{ cm}^2$  (D)  $25 \text{ cm}^2$