

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** Number of right angles in a triangle can be:
- (A) 3 (B) 2
(C) 1 (D) 4
- 2** The square root of $a^2 - 2a + 1$ is:
- (A) $\pm(a-1)$ (B) $\pm(a+1)$
(C) $\pm(a-2)$ (D) $\pm(a+2)$
- 3** $A(\text{Adj } A) =$ _____:
- (A) $\det A, A^{-1}$ (B) $\det A + I$
(C) $A \cdot I$ (D) $(\det A)I$
- 4** 1 hectare \approx _____ acres:
- (A) 2.6 (B) 3.6
(C) 2.5 (D) 3.5
- 5** _____ altitudes of an isosceles triangle are congruent:
- (A) One (B) Two
(C) Three (D) Four
- 6** Mid-point of the points (2, -2) and (-2, 2) is:
- (A) (0, 0) (B) (1, 1)
(C) (2, 2) (D) (-2, -2)
- 7** Symbol used for "therefore" is:
- (A) \equiv (B) \perp
(C) \therefore (D) \because
- 8** The right bisector of congruent sides of an isosceles triangle and its altitudes are:
- (A) Equal (B) Congruent
(C) Non-concurrent (D) Concurrent

9 $\left(\frac{25}{16}\right)^{-\frac{1}{2}} =$ _____

- (A) $\frac{5}{4}$ (B) $\frac{4}{5}$
(C) $\frac{-5}{4}$ (D) $\frac{-4}{5}$

10 $\frac{a^2 - b^2}{a + b} =$ _____

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

11 Proportion is equality of _____ ratios:

- (A) Two (B) Three
(C) Four (D) Five

12 $x = 0$ is a solution of the inequality _____.

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

13 $\frac{x^2}{y^2} - 2 + \frac{y^2}{x^2} =$ _____

- (A) $\left(\frac{x^2 + y^2}{xy}\right)^2$ (B) $\left(\frac{x^2 - y^2}{xy}\right)^2$
(C) $\left(\frac{x - y}{xy}\right)^2$ (D) $\left(\frac{x + y}{xy}\right)^2$

14 $\log_{10} e \approx$ _____

- (A) 0.4646 (B) 0.4545
(C) 0.4343 (D) 0.423

15 Medians of a triangle are _____:

- (A) Non concurrent (B) Concurrent
(C) Congruent (D) Equal