

NOTE: There are three sections of this paper. Carefully read the instructions for each section and attempt accordingly. Attempt all questions of Section-A and return it to the Superintendent within given time, even if you have not attempted any question. No marks will be awarded for cutting/erasing/overwriting.

SECTION-A

Time Allowed: 20 Minutes

Max. Marks: 15

1. There are four possible answers (A, B, C, D) for each question. Select the correct one and write it in the answer box.

- i. If $\log_{64} x = \frac{-5}{6}$ then what will be value of x ? [A] $\frac{1}{32}$, B) 64, C) $\frac{1}{8}$, D) 8].....
- ii. If "A" is a square matrix and $a^t = A$ is a matrix. [A] skew symmetric, B) symmetric, C) diagonal, D) none of these].....
- iii. Which one is the base of common logarithm? [A] 1, B) e, C) 10, D) zero].....
- iv. $(\sqrt{b})^{1/3} = \dots\dots\dots$ [A] b, B) $b^{1/3}$, C) $b^{1/6}$, D) $b^{1/9}$].....
- v. Which one is the HCF of $a^3 - b^3$ and $a^2 + ab + b^2$? [A] $(a + b)$, B) $a^2 + ab + b^2$, C) $(a - b)$, D) $(a - b)^2$]...
- vi. What is the LCM of $x^3 + 8$ and $x + 2$? [A] $x + 2$, B) $x^3 + 8$, C) $(x + 2)(x^3 + 8)$, D) $x^3 + 16$].....
- vii. Which one is the solution set of $\sqrt{x} = -10$? [A] {100}, B) {10}, C) {-10}, D) { }].....
- viii. Which type of equation $\sqrt{x+3} + 2 = 11$ is? [A] linear equation, B) radical equation, C) cubic equation, D) quadratic equation].....
- ix. In which quadrant lies the point (3, -4)? [A] quadrant-I, B) quadrant-II, C) quadrant-III, D) quadrant-IV].....
- x. Which one is the mid point of the segment \overline{AB} , where A(3,0) and B(3,4)? [A] 3,3, B) 3,2, C) 6,4, D) 6,2].....
- xi. Which one is the sum of measurements of interior angles of quadrilateral? [A] 2 right angles, B) 4 right angles, C) 3 right angles, D) none of these].....
- xii. In an equilateral triangle, all the perpendicular bisectors are: [A] congruent, B) concurrent, C) angles bisector, D) all of these].....
- xiii. Which of these are the sides of a right angled triangle? [A] 2,3,4, B) 3,4,5, C) 4,5,6, D) 5,6,7].....
- xiv. Which one of a triangle are concurrent? [A] medians, B) perpendicular bisectors, C) altitudes, D) all of these].....
- xv. How many obtuse angles can be there in a triangle? [A] at least one, B) at the most one, C) two, D) vary from triangle to triangle].....