

**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. In class interval (5–9) the upper limit is ..... [A] 5, [B] 6, [C] 8, [D] 9].....
  - ii. In data 7.9, 8.7, 13.5, 12, 15.2, 14.1, the arithmetic mean is ..... [A] 8.5, [B] 11.9, [C] 12.3, [D] 14.2] .....
  - iii.  $\sin 50^\circ = \cos$  ..... [A]  $30^\circ$ , [B]  $40^\circ$ , [C]  $50^\circ$ , [D]  $60^\circ$ ] .....
  - iv.  $\cot \theta =$  ..... [A]  $\frac{\sin \theta}{\cos \theta}$ , [B]  $\frac{1}{\sin \theta}$ , [C]  $\frac{1}{\sec \theta}$ , [D]  $\frac{\cos \theta}{\sin \theta}$ ] .....
  - v.  $\sec 60^\circ =$  ..... [A]  $\frac{1}{2}$ , [B]  $\frac{2}{3}$ , [C] 2, [D]  $\sqrt{2}$ ] .....
  - vi. If a circle passes through the three vertices of a triangle then it is called the ..... circle of the triangle. [A] inscribed, [B] escribed, [C] circum, [D] none] .....
  - vii. Length of the line joining all points of a circle, which are equidistant from its centre, is called ..... of the circle. [A] circumference, [B] radius, [C] diameter, [D] chord] .....
  - viii.  $|a+b|$  ..... [A]  $<|a|+|b|$ , [B]  $=|a|+|b|$ , [C]  $>|a|+|b|$ , [D]  $\geq|a|+|b|$ ] .....
  - ix. The degree of the polynomial  $1+19x-x^2$  is ..... [A] zero, [B] one, [C] two, [D] three] .....
  - x. Point (2,1) lies ..... [A] in 1st quadrant, [B] in 2nd quadrant, [C] on x-axis, [D] on y-axis] .....
  - xi. The solution set of the radical equation  $\sqrt{x+9}=5$  is ..... [A] {5}, [B] {9}, [C] {16}, [D] {4}] .....
  - xii. Eliminating "t" from  $x=\sqrt{3t}$ ,  $y=5t$  we get ..... [A]  $x^2=y$ , [B]  $5x^2=3y$ , [C]  $3x=5y$ , [D] none] .....
  - xiii. If  $v < t$  then ..... [A]  $v=\frac{k}{t}$ , [B]  $v=t$ , [C]  $v=kt$ , [D]  $vk=t^2$ ] .....
  - xiv. If  $\frac{a}{b}=\frac{c}{d}$  then  $\frac{a+b}{a-b}=\frac{c+d}{c-d}$  exhibits the property called ..... [A] componendo dividendo, [B] invertendo, [C] alternendo, [D] continued proportion] .....
  - xv. If  $x:15=25:30$  then  $x=$  ..... [A] 15.2, [B] 12.5, [C] 25.3, [D] 30] .....