ROLL NUMBER ESKP-10XIII01

MATHEMATICS – 10th

Supdt. Sign & Seal .....

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 arithmatic mean is ..... [A) 8.5, B) 11.9, C) 12.3, D) 14.2] ☐

iii. $\sin 50^\circ = \cos$ ..... [A) 30°, B) 40°, C) 50°, D) 60°] ☐

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) $\frac{2}{\sqrt{3}}$, 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 $v \propto t$ 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] ☐