

10th Class 2019

Math (Science)

Group-I

PAPER-II

Time: 20 Minutes

(Objective Type)

Max. Marks: 15

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- $(x + 3)^2 = x^2 + 6x + 9$ is:
(a) A linear equation (b) An equation
(c) An identity ✓ (d) Fraction
- 2- A circle has only one _____.
(a) Secant (b) Chord
(c) Diameter (d) Centre ✓
- 3- If $\tan \theta = \sqrt{3}$, then θ is equal to:
(a) 90° (b) 45°
(c) 60° ✓ (d) 30°
- 4- How many common tangents can be drawn for two disjoint circles?
(a) 1 (b) 2
(c) 3 (d) 4 ✓
- 5- Cube roots of '-1' are:
(a) $-1, \omega, -\omega^2$ (b) $-1, -\omega, -\omega^2$ ✓
(c) $-1, -\omega, \omega^2$ (d) $1, -\omega, -\omega^2$
- 6- Point $(-1, 4)$ lies in _____ quadrant.
(a) I (b) II ✓
(c) III (d) IV
- 7- The distance of any point of the circle to its centre is called:
(a) Radius ✓ (b) Diameter
(c) A chord (d) An arc

- 8- If $u \propto v^2$, then:
(a) $u = v^2$ (b) $u = kv^2 \checkmark$
(c) $uv^2 = k$ (d) $uv^2 = 1$
- 9- A pair of chords of a circle subtending two congruent central angles is:
(a) Incongruent (b) Congruent \checkmark
(c) Overlapping (d) Parallel
- 10- The number of elements in a power set $\{1, 2, 3\}$ is:
(a) 4 (b) 6
(c) 8 \checkmark (d) 9
- 11- The discriminant of $ax^2 + bx + c = 0$ is:
(a) $-b^2 - 4ac$ (b) $b^2 + 4ac$
(c) $-b^2 + 4ac$ (d) $b^2 - 4ac \checkmark$
- 12- If $a : b = x : y$, then alternando property is:
(a) $\frac{a}{x} = \frac{b}{y} \checkmark$ (b) $\frac{a}{b} = \frac{x}{y}$
(c) $\frac{a+b}{b} = \frac{x+y}{y}$ (d) $\frac{a-b}{x} = \frac{x-y}{y}$
- 13- A frequency polygon is a many-sided:
(a) Closed figure \checkmark (b) Rectangle
(c) Square (d) Circle
- 14- The number of methods to solve a quadratic equation is:
(a) 1 (b) 2
(c) 3 \checkmark (d) 4
- 15- $\sec \theta \cot \theta = \underline{\hspace{2cm}}$.
(a) $\sin \theta$ (b) $\frac{1}{\cos \theta}$
(c) $\frac{1}{\sin \theta} \checkmark$ (d) $\frac{\sin \theta}{\cos \theta}$