

10th Class 2020

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- $\frac{2x + 1}{(x + 1)(x - 1)}$ is:
- (a) An improper fraction
 - (b) An equation
 - (c) A proper fraction ✓
 - (d) Identity
- 2- A line which has only one point in common with a circle is called:
- (a) Sine of a circle
 - (b) Cosine of a circle
 - (c) Tangent of a circle ✓
 - (d) Secant of a circle
- 3- The spread or scattering of observations in a data set is called:
- (a) Average
 - (b) Central tendency
 - (c) Dispersion ✓
 - (d) Median
- 4- The measure of the external angle of a regular hexagon is:
- (a) $\frac{\pi}{2}$
 - (b) $\frac{\pi}{3}$ ✓
 - (c) $\frac{\pi}{4}$
 - (d) $\frac{\pi}{6}$
- 5- Two linear factors of $x^2 - 15x + 56$ are:
- (a) $(x - 7)$ & $(x + 8)$
 - (b) $(x + 7)$ & $(x - 8)$
 - (c) $(x - 7)$ & $(x - 8)$ ✓
 - (d) $(x + 7)$ & $(x + 8)$

- 6- A collection of well-defined objects is called:
 (a) Subset (b) Proper set
 (c) Power set (d) Set ✓
- 7- The symbol for a triangle is denoted by:
 (a) \angle (b) Δ ✓
 (c) \perp (d) \odot
- 8- In a proportion $a : b :: c : d$, b and c are called:
 (a) Means ✓ (b) Extremes
 (c) Fourth proportional (d) Third proportional
- 9- A pair of chords of a circle subtending two congruent central angles is:
 (a) Congruent ✓ (b) Incongruent
 (c) Overlapping (d) Parallel
- 10- $A \cup (B \cap C)$ is equal to:
 (a) $(A \cup B) \cap (A \cup C)$ ✓ (b) $A \cap (B \cap C)$
 (c) $(A \cap B) \cup (A \cap C)$ (d) $A \cup (B \cup C)$
- 11- The number of methods to solve a quadratic equation is:
 (a) 1 (b) 2
 (c) 3 ✓ (d) 4
- 12- If $\frac{u}{v} = \frac{v}{w} = k$, then:
 (a) $u = vk^2$ (b) $u = wk^2$ ✓
 (c) $u = w^2k$ (d) $u = v^2k$
- 13- A histogram is a set of adjacent:
 (a) Squares (b) Rectangles ✓
 (c) Circles (d) Triangles
- 14- Cube roots of -1 are:
 (a) $-1, -\omega, -\omega^2$ ✓ (b) $-1, \omega, -\omega^2$
 (c) $-1, -\omega, \omega^2$ (d) $1, \omega, -\omega^2$
- 15- $\frac{1}{1 + \sin \theta} + \frac{1}{1 - \sin \theta} = \dots$
 (a) $2 \sec^2 \theta$ ✓ (b) $2 \cos^2 \theta$
 (c) $\sec^2 \theta$ (d) $\cos \theta$