

10th Class 2017

Math (Science)	Group-II	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- The solution set of equation $4x^2 - 16 = 0$ is:
- (a) $\{\pm 4\}$ (b) $\{4\}$
(c) $\{\pm 2\}$ ✓ (d) ± 2
- 2- Cube roots of -1 are:
- (a) $-1, -\omega, -\omega^2$ ✓ (b) $-1, \omega, -\omega^2$
(c) $-1, -\omega, \omega^2$ (d) $1, -\omega, -\omega^2$
- 3- If α, β are the roots of $x^2 - x - 1 = 0$, then product of the roots 2α and 2β is:
- (a) -2 (b) 2
(c) 4 (d) -4 ✓
- 4- Find x in proportion $4 : x :: 5 : 15$:
- (a) $\frac{75}{4}$ (b) $\frac{4}{3}$ ✓
(c) $\frac{3}{4}$ (d) 12 ✓
- 5- The third proportional of x^2 and y^2 is:
- (a) $\frac{y^2}{x^2}$ (b) x^2y^2
(c) $\frac{y^4}{x^2}$ ✓ (d) $\frac{y^2}{x^4}$
- 6- The set having only one element is called:
- (a) Null set (b) Power set
(c) Singleton set ✓ (d) Subset

- 7- The different number of ways to describe a set is:
(a) 1 (b) 3 ✓
(c) 2 (d) 4
- 8- If $A \subseteq B$, then $A - B$ is equal to:
(a) A (b) ϕ ✓
(c) B (d) $B - A$
- 9- The extent of variation between two extreme observations of a data set is measured by:
(a) Range ✓ (b) Average
(c) Quartiles (d) Median
- 10- $\frac{3\pi}{4}$ radian = ----- .
(a) 115° (b) 150°
(c) 30° (d) 135° ✓
- 11- The distance of any point of the circle to its centre is called:
(a) Diameter (b) A chord
(c) Radius ✓ (d) An arc
- 12- Tangents drawn at the ends of diameter of a circle are ----- to each other.
(a) Parallel ✓ (b) Non-parallel
(c) Collinear (d) Perpendicular
- 13- $\sec^2 \theta = \text{-----}$.
(a) $1 - \sin^2 \theta$ (b) $1 + \tan^2 \theta$ ✓
(c) $1 + \cos^2 \theta$ (d) $1 - \tan^2 \theta$
- 14- The portion of a circle between two radii and an arc is called:
(a) Sector ✓ (b) Segment
(c) Chord (d) Diameter
- 15- How many common tangents can be drawn for two touching circles?
(a) 2 (b) 1
(c) 4 (d) 3 ✓