

# 10th Class 2018

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) An inequation
- 2- Point  $(-1, 4)$  lies in the quadrant:
- (a) I
  - (b) II ✓
  - (c) III
  - (d) IV
- 3- A complete circle is divided into:
- (a)  $90^\circ$
  - (b)  $180^\circ$
  - (c)  $270^\circ$
  - (d)  $360^\circ$  ✓
- 4- The measure of the external angle of a regular octagon is:
- (a)  $\frac{\pi}{10}$
  - (b)  $\frac{\pi}{6}$
  - (c)  $\frac{\pi}{8}$
  - (d)  $\frac{\pi}{4}$  ✓
- 5- Two tangents drawn to a circle from a point outside it are of \_\_\_\_\_ in length:
- (a) Half
  - (b) Equal ✓
  - (c) Double
  - (d) Triple
- 6- The solution set of equation  $4x^2 - 16 = 0$  is:
- (a)  $\{\pm 4\}$
  - (b)  $\{4\}$
  - (c)  $\{\pm 2\}$  ✓
  - (d)  $\pm 2$

- 7-  $\frac{1}{\alpha} + \frac{1}{\beta}$  is equal to:
- (a)  $\frac{1}{\alpha}$  (b)  $\frac{1}{\alpha} - \frac{1}{\beta}$   
(c)  $\frac{\alpha - \beta}{\alpha\beta}$  (d)  $\frac{\alpha + \beta}{\alpha\beta} \sqrt{\quad}$
- 8- If  $\frac{u}{v} = \frac{v}{w} = k$ , then:
- (a)  $u = wk^2 \sqrt{\quad}$  (b)  $u = vk^2$   
(c)  $u = w^2k$  (d)  $u = v^2k$
- 9- The extent of variation between two extreme observations of a data set is measured by:
- (a) Average (b) Range  $\sqrt{\quad}$   
(c) Quartiles (d) Median
- 10- The length of a chord and the radial segment of a circle are congruent, the central angle made by the chord will be:
- (a)  $60^\circ \sqrt{\quad}$  (b)  $45^\circ$   
(c)  $30^\circ$  (d)  $75^\circ$
- 11-  $\operatorname{cosec}^2 \theta - \cot^2 \theta = \text{-----}$ .
- (a)  $1 \sqrt{\quad}$  (b)  $-1$   
(c)  $0$  (d)  $\tan \theta$
- 12- Product of cube roots of unity is:
- (a)  $0$  (b)  $1 \sqrt{\quad}$   
(c)  $-1$  (d)  $3$
- 13- A line intersecting a circle is called:
- (a) Tangent (b) Chord  
(c) Secant  $\sqrt{\quad}$  (d) Diameter
- 14- In a proportion  $a : b :: c : d$ ,  $b$  and  $c$  are called:
- (a) Means  $\sqrt{\quad}$  (b) Extremes  
(c) Fourth proportional (d) Third proportional
- 15- A collection of well-defined objects is called:
- (a) Subset (b) Power set  
(c) Set  $\sqrt{\quad}$  (d) Super set