10th Class 2021

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- 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) $(x + 7)$ & $(x + 8)$

2- Product of cube roots of unity is:

(a) 0   (b) 1 ✓

(c) −1   (d) 3

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- In a proportion $a : b :: c : d$, b and c are called:

(a) Means ✓   (b) Extremes

(c) Third proportional   (d) Fourth proportional

5- If $y^2 \propto \dfrac{1}{x^3}$, then:

(a) $y^2 = \dfrac{k}{x^3}$ ✓   (b) $y^2 = \dfrac{1}{x^3}$

(c) $y^2 = x^3$ (d) $y^2 = k\,x^3$

6- Two square roots of unity are:

(a) $1, -1$ ✓   (b) $1, \omega$

(c) $1, -\omega$ (d) ω, ω^2

7- If $A \subseteq B$, then $A \cup B$ is equal to:

(a) A ✓   (b) B

(c) ϕ (d) $A - B$

8- The domain of R = {(0, 2), (2, 3), (3, 3), (3, 4)} is:
  (a) {0, 3, 4}   (b) {2, 3, 4}
  (c) {0, 2, 4}   (d) {0, 2, 3} ✓

9- A histogram is a set of adjacent:
  (a) Squares   (b) Rectangles ✓
  (c) Circles   (d) Triangles

10- The spread or scatterness of observations in a data set is called:
  (a) Average   (b) Central tendency
  (c) Dispersion ✓   (d) Mean

11- $\frac{3\pi}{4}$ radians = :
  (a) 115°   (b) 30°
  (c) 150°   (d) 135° ✓

12- Line segment joining any point of the circle to the centre is called:
  (a) Radial segment ✓ (b) Diameter
  (c) Circumference   (d) Perimeter

13- A circle has only one _____.
  (a) Secant   (b) Chord
  (c) Diameter   (d) Centre ✓

14- The arcs opposite to incongruent central angles of a circle are always:
  (a) Congruent   (b) Incongruent ✓
  (c) Parallel   (d) Perpendicular

15- The portion of a circle between two radii and an arc is called:
  (a) Chord   (b) Segment
  (c) Sector ✓   (d) Diameter