9th Class 2021

Math (Science)	Group-II	Paper-I
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- In $\sqrt[3]{35}$, the radicand is:

(a) 3
(b) $\frac{1}{3}$
(c) 35 ✓
(d) None of these

2- H.C.F. of $a^2 - b^2$ and $a^3 - b^3$ is _____.

(a) $a - b$ ✓
(b) $a + b$
(c) $a^2 + ab + b^2$
(d) $a^2 - ab + b^2$

3- The right bisectors of the three sides of a triangle are _____.

(a) Congruent
(b) Collinear
(c) Concurrent ✓
(d) Parallel

4- Point (2, –3) lies in quadrant:

(a) I
(b) II
(c) III
(d) IV ✓

5- The product of $[x \quad y] \begin{bmatrix} 2 \\ -1 \end{bmatrix}$ is:

(a) $[2x + y]$
(b) $[x - 2y]$
(c) $[2x - y]$ ✓
(d) $[x + 2y]$

6- If x is no larger than 10, then _____.

(a) $x \geq 8$
(b) $x \leq 10$ ✓
(c) $x < 10$
(d) $x > 0$

7. A point equidistant from the end points of a line segment is on its _____.
   - (a) Bisector
   - (b) Right bisector ✓
   - (c) Perpendicular
   - (d) Median

8. Write $4^{2/3}$ with radical sign:
   - (a) $\sqrt[3]{4^2}$ ✓
   - (b) $\sqrt{4^3}$
   - (c) $\sqrt[-2]{4^3}$
   - (d) $\sqrt{4^6}$

9. $\log e =$ _____, where ($e \approx 2.718$).
   - (a) 0
   - (b) 0.4343
   - (c) ∞
   - (d) 1 ✓

10. Adj of $\begin{bmatrix} 1 & 2 \\ 0 & -1 \end{bmatrix}$ is:
    - (a) $\begin{bmatrix} -1 & -2 \\ 0 & 1 \end{bmatrix}$ ✓
    - (b) $\begin{bmatrix} 1 & -2 \\ 0 & -1 \end{bmatrix}$
    - (c) $\begin{bmatrix} -1 & 2 \\ 0 & -1 \end{bmatrix}$
    - (d) $\begin{bmatrix} -1 & 0 \\ 2 & 1 \end{bmatrix}$

11. H.C.F. of $x^2 - 5x + 6$ and $x^2 - x - 6$ is:
    - (a) $x - 3$ ✓
    - (b) $x + 2$
    - (c) $x^2 - 4$
    - (d) $x - 2$

12. Mid-point of the points $(2, 2)$ and $(0, 0)$ is:
    - (a) $(1, 1)$ ✓
    - (b) $(1, 0)$
    - (c) $(0, 1)$
    - (d) $(-1, -1)$

13. $a^3 + b^3 =$ _____.
    - (a) $(a - b)(a^2 + ab + b^2)$
    - (b) $(a + b)(a^2 - ab + b^2)$ ✓
    - (c) $(a - b)(a^2 - ab + b^2)$
    - (d) $(a - b)(a^2 + ab - b^2)$

14- The value of $\log\left(\dfrac{p}{q}\right)$ is :

    (a) $\log p - \log q$ ✓

    (b) $\dfrac{\log p}{\log q}$

    (c) $\log p + \log q$

    (d) $\log q - \log p$

15- Factors of $a^4 - 4b^4$ are _____.

    (a) $(a - b), (a + b), (a^2 + 4b^2)$

    (b) $(a^2 - 2b^2), (a^2 + 2b^2)$ ✓

    (c) $(a - b), (a + b), (a^2 - 4b^2)$

    (d) $(a - 2b), (a^2 + 2b^2)$