Mathematics Paper – IX (01) (19)

Name

Roll No

1۔ ہر سوال کے سامنے چار دائرے دیے گئے ہیں، صرف صحیح جواب والا دائرہ بھر دیں۔
2۔ دائروں کو شیڈ (بھرنے) کے لئے نیلے یا کالے رنگ کا مار کر استعمال کریں۔
3۔ جواب میں ایک سے زائد دائرے بھرنے سے جواب غلط تصور ہو گا۔

Time Allowed: 20 Minutes | **SECTION – A** | **Marks : 15**

1	HCF of $(a-b)^4$ and $(a-b)^3$ is.....	○ $a-b$	● $(a-b)^3$	○ $(a-b)^4$	○ $(a-b)^7$
2	In ΔABC, if $\angle A \cong \angle B$, the bisector ..... divides the ΔABC into two congruent triangles.	○ $\angle A$	○ $\angle B$	● $\angle C$	○ Any one of its angles
3	The point (3, –5) is located in quadrant is....	○ IV	○ III	○ II	○ I
4	The coordinate of the midpoints of the segment joining the points (8, – 5) and (– 2, 9) are.....	○ (2, 3)	○ (3, 2)	○ (5, 4)	○ (4, 5)
5	The area of a triangle with base $\frac{15}{4}$ cm and altitude $\frac{8}{5}$ cm will be.....	○ $2cm^2$	○ $3cm^2$	○ $4.35cm^2$	○ $6cm^2$
6	A triangle having all the three sides are different in length is.....	○ Equilateral	○ Isosceles	● Scalene	○ Right
7	A line which is perpendicular to a line segment at its mid point is called.....	● Perpendicular bisector	○ Angle bisector	○ Altitude	○ Median
8	In a class with 32 students, the ratio of girls to boys is 5 to 3. How many more girls are there than boys?	○ 2	○ 8	○ 12	○ 20
9	$\begin{bmatrix} 4 & -1 \\ -9 & 2 \end{bmatrix}$ = ...	● – 1	○ – 17	○ 1	○ 17
10	$\sqrt{-1} \times \sqrt{-1}$ = ...	○ 0	○ i	● – 1	○ 1
11	2 (3 +4) = 2×3+2×4 this property is....	○ Commutative	○ Associative	● Distributive	○ Closure
12	The characteristic of log 0.435 is.....	○ 0	● – 1	○ 1	○ 2
13	Factor of $x^2 + 2x - 24$ is.....	○ x + 4, x – 6	○ x – 4, x + 6	● x + 3, x – 8	○ x + 8, x – 3
14	$\log_b m = t$ in exponential equation is equal to.....	○ $t = m^b$	○ $b^m = t$	● $m = b^t$	○ $m^t = b$
15	The solution set of $\sqrt{x} = -10$ is	○ {– 10}	○ {10}	● {100}	○ { }

P-320

Mathematics (New)

9th (Fresh/Reappear)

Note: **Time allowed for Section – B and Section – C is 2 Hours and 40 minutes.**

Section – B

Marks: 36

Q-II Attempt any NINE parts. Each part carries FOUR marks.

1. If $A = \begin{bmatrix} 2 & 0 \\ -3 & 1 \end{bmatrix}$, $B = \begin{bmatrix} 1 & -1 \\ -1 & 3 \end{bmatrix}$ Find A^{-1} and B^{-1}.
2. Solve the equation $x - 2y - 1 = 0$, $2x + 3y + 3 = 0$ with the help of matrices.
3. Prove that $\left(\frac{4^5 \cdot 64^3 \cdot 2^3}{8^5 \cdot (128)^2}\right)^{\frac{1}{2}} = 2$
4. Solve 3.81×43.4 with the help of logarithm.
5. Find the values of $a^2 + b^2$ and ab, when $a + b = 5$, $a - b = 2$.
6. Factorize $x^2 + x - 12$
7. Factorize $18(x - y)^3 - 144(a - b)^3$
8. Find the square root of $x^4 + 4x^3 + 6x^2 + 4x + 1$
9. If $x = 5 - 2\sqrt{6}$. Find the values of $x + \frac{1}{x}$ and $x^2 + \frac{1}{x^2}$
10. Solve $2x + 3 = 1 - 6(x - 1)$
11. Solve for x, $4|5x - 2| + 3 = 11$
12. HCF = $x - 2$, LCM = $x^3 + 3x^2 - 6x - 8$, $A = x^2 + 2x - 8$, Find B.

Section – C

Marks: 24

Note : **Attempt any THREE questions. All questions carry equal marks.**

Q-III Prove that A (–4, –3), B (1, 4) and C (6, 11) are collinear.

Q-IV If two angles of a triangle are congruent, then the sides opposite to those angles are congruent.

Q-V The bisectors of the angles of a triangle are concurrent.

Q-VI Construct a ΔPQR, draw their altitude and verify their concurrency, when $m\overline{PQ} = 6cm$, $m\angle P = 70°$ and $m\angle Q = 65°$. Also write the steps of construction.