MATHEMATICS



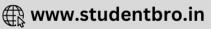
DPP No. 12

Topic	cs : Fundamentals of	Mathematics, Quadra	atic Equation, Pa	rabola ————————————————————————————————————			
Type of Questions Comprehension (no negative marking) Q.1 to Q.3 (3 marks, 3 min.)						Min. 9]	
Single choice Objective (no negative marking) Q.1 to Q.3 Multiple choice objective (no negative marking) Q. 8 Subjective Questions (no negative marking) Q. 8 (5 marks, 3 min.) (5 marks, 4 min.) (4 marks, 5 min.)					[9, [12, [5, [4,	12] 4] 5]	
COM	PREHENSION (For Q.I The coordinates of the	No. 1 to 3) ne vertex of the parabola	a $f(x) = 2x^2 + px + c$	q are (–3, 1), then			
1.	The value of p is (A) 12	(B) – 12	(C) 19	(D) – 19			
2.	The value of q is (A) – 19	(B) 19	(C) – 12	(D) none of	these		
3.	The parabola (A) touches the x-axis (C) lies completely above the x-axis		` '	(B) intersect the x-axis in two real and distinct points (D) lies completely below the x-axis			
4.	The solution set of the inequation $\left \frac{1}{x} - 2 \right < 4$, is						
	(A) (-∞, -1/2)	(B) (1/6, ∞)	(C) (-1/2, 1/6)	(D) (-∞, -1/2	2) ∪ (1/6, ∞)	
5.	Minimum value of f (x	$(x) = 2x^2 - 4x + 5$ is					
	(A) 1	(B) – 1	(C) 11	(D) 3			
6.	The least integral value of 'm' for which the expression $mx^2 - 4x + 3m + 1$ is positive for every $x \in R$ is :						
	(A) 1	(B) -2	(C) - 1	(D) 2			
7.	The least integral va (A) – 6	alue of 'a' for which the (B) – 5	e graphs y = 2ax + (C) 3	1 and y = $(a - 6) x^2 - (D) 2$	2 do not ir	itersect	
8.	If the quadratic equa (A) 4	tions $x^2 - 5x + 4 = 0$ and (B) 8	$dx^2 - 6x + k = 0$ ha (C) 3	ve one common root, th	nen 'k' is eo	ual to	
9.	Match the following Consider the parabola $f(x) = x^2 + kx + 4$ Column – I Column – II						
	(A) Curve interse	ects the x-axis for		$(p) k \in (-\infty, -4)$	∪ (4, ∞)		

- (B) Curve touches the x-axis for
- (C) Curve neither intersect nor touches the x-axis for
- $f(x) > 0 \ \forall \ x \in R \text{ for }$ (D)

- (q) $k\in \left(\!-\!4,\,4\right)$
- $k \in \{-4, 4\}$





Answers Key

1. (A) **2.** (B) **3.** (C) **4.** (D) **5.** (D)

6. (D) **7.** (B) **8.** (B)(D)

9. (A) \rightarrow (p), (B) \rightarrow (r), (C) \rightarrow (q), (D) \rightarrow (q)

