## **Udaan 2025**

## **Maths**

**DHA: 3** 

## Pair of Linear Equations in Two Variables

- **Q 1** If a pair of linear equations is given by  $a_1x + b_1y + c_1 = 0$  and  $a_2x + b_2y + c_2 = 0$  and  $rac{a_1}{a_2} = rac{b_1}{b_2} 
  eq rac{c_1}{c_2}$  . In this case, the pair of linear equations is consistent.
  - (A) True
- (B) False
- (C) Cannot say
- (D) Partially true/false
- **Q** 2 The value of 'k' for which the system of linear equations x + 2y = 3, 5x + ky + 7 = 0 is inconsistent
  - (A)  $-\frac{14}{3}$
- (B)  $\frac{2}{5}$
- (C) 5
- (D) 10
- **Q** 3 For what value of 'k', will the following pair of linear equations have infinitely many solutions?

$$2x + 3y = 4$$
 and  $(k + 2)x + 6y = 3k + 2$ 

- (A) 1
- (C)3
- **Q 4** For what value of 'p', will the following system of linear equations represent parallel lines?

$$-x + py = 1$$
 and  $px - y = 1$ 

- (A) 2
- (B) 3
- (C)1
- (D) None of these
- **Q** 5 One equation of a pair of dependent linear equations is -5x + 7y = 2. The second equation can be
  - (A) 10x + 14y + 4 = 0
  - (B) -10x + 14y + 4 = 0
  - (C) -10x 14y + 4 = 0
  - (D) 10x 14y = -4
- **Q 6** The value of 'k' for which the system of equations x -2y = 3 and 3x + ky = 1 has a unique solution is (A) k = -6

$$\bigcirc \text{(B) } k \neq -6$$

- (C) k = 0
- (D) None of these
- Graphically, the pair of equations 6x 3y + 10 = 0, 2x - y + 9 = 0 represents two lines which are
  - (A) intersecting at exactly one point.
  - (B) intersecting at exactly two points.
  - (C) coincident
  - (D) parallel
- **Q 8** If  $am \neq bl$ , then the system of equations

$$ax + by = c$$
 and  $lx + my = n$  has

- (A) unique solution.
  - (B) no solution.
  - (C) infinitely many solutions.
  - (D) may or may not have a solution.
- **Q** 9 If the pair of linear equations 2x + 3y = 7 and  $2\alpha x + (\alpha + \beta)y = 28$  has infinitely many solutions, then the value of  $\alpha$  and  $\beta$  are
  - (A) 3 and 5
- (B) 4 and 5
- (C) 4 and 7
- (D) 4 and 8

**Q 10** 
$$\frac{x}{2} + y = 0.8, \frac{7}{x + \frac{y}{2}} = 10$$
 (A)  $x = 0.4, y = 0.6$ 

(A) 
$$x = 0.4$$
,  $y = 0.6$ 

(B) 
$$x = 0.1$$
,  $y = 0.5$   
(C)  $x = 0.5$ ,  $y = 0.8$ 

(D) 
$$x = 0.2$$
,  $y = 0.4$ 

**Q 11** 
$$7(y+3) - 2(x+2) = 14, 4(y-2) + 3(x-3) = 2$$

(A) 
$$y = 3$$
,  $x = 2$ 

(B) 
$$y = 2$$
,  $x = 4$ 

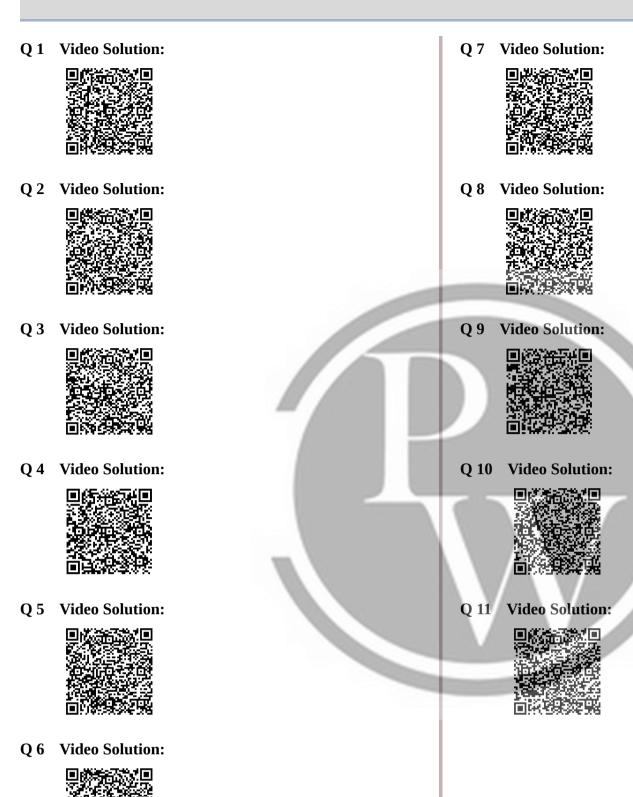
(C) 
$$y = 3$$
,  $x = 7$ 

(D) 
$$y = 1, x = 5$$

		Answe	<b>Answer Key</b>		
Q1	В		<b>Q</b> 7	D	
Q2	D		Q8	A	
<b>Q</b> 3	В		Q9	D	
Q4	C		Q10	A	
<b>Q</b> 5	D		Q11	D	
<b>Q6</b>	В				



## **Hints & Solutions**





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