

Matrices - Class XII

Past Year JEE Questions

Questions

Question: 01

The values of a and b , for which the system of equations

$$2x + 3y + 6z = 8$$

$$x + 2y + az = 5$$

$$3x + 5y + 9z = b$$

has no solution, are :

- A. $a = 3, b \neq 3$
- B. $a \neq 3, b \neq 13$
- C. $a \neq 3, b = 3$
- D. $a = 3, b = 13$

Solutions

Solution: 01

Explanation

$$D = \begin{vmatrix} 2 & 3 & 6 \\ 1 & 2 & a \\ 3 & 5 & 9 \end{vmatrix} = 3 - a$$

$$D = \begin{vmatrix} 2 & 3 & 8 \\ 1 & 2 & 5 \\ 3 & 5 & b \end{vmatrix} = b - 13$$

If $a = 3, b \neq 13$, no solution.