MATHS

BOOKS - JEE MAINS PREVIOUS YEAR

DETERMINANTS

Others

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1. If

$$D = |11111 + x1111 + y| \text{ for } x \neq 0, y \neq 0$$

then D is (1) divisible by neither x nor y (2)

divisible by both x and y (3) divisible by x but not y (4) divisible by y but not x

2. The set of all values of λ for which the system of linear equations :

$$2x_1 - 2x_2 + x_3 = \lambda x_1$$

$$2x_1 - 3x_2 + 2x_3 = \lambda x_2 \qquad -x_1 + 2x_2 = \lambda x_3$$

has a non-trivial solution,

(1) is an empty set

(2) is a singleton

(3) contains two elements

(4) contains more than two elements

3. The system of linear equations

$$x + \lambda y - z = 0 \qquad\qquad \lambda x - y - z = 0$$

$x + y - \lambda z = 0$ has a non-trivial solution for :

(1) infinitely many values of λ . (2) exactly one value of λ . (3) exactly two values of λ . (4) exactly three values of λ .

4. If S is the set of distinct values of $'b$ for which the following system of linear equations

$$x + y + z = 1 \qquad\qquad x + ay + z = 1$$

$ax + by + z = 0$ has no solution, then S is :

(1) a finite set containing two or more elements

(2) a singleton set

(3) an empty set

(4) an infinite set