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Class XII : Maths
Chapter 3 : Matrices

Questions and Solutions | Exercise 3.4 - NCERT Books

Question 1:

Matrices *A* and *B* will be inverse of each other only if

A. *AB = BA*

C. *AB = 0, BA = I*

B. *AB = BA = 0*

D. *AB = BA = I*

Answer

Answer: D

We know that if *A* is a square matrix of order *m*, and if there exists another square matrix *B* of the same order *m*, such that *AB = BA = I*, then *B* is said to be the inverse of *A*. In this case, it is clear that *A* is the inverse of *B*.

Thus, matrices *A* and *B* will be inverses of each other only if *AB = BA = I*.