Determinants - Class XII

Related Questions with Solutions

Questions

Quetion: 01

If A, B and C are square matrices of order n such that $\det(\mathrm{A}) = 3, \det(\mathrm{B}) = 4, \det(\mathrm{C}) = 5$, then the value of $\left[\det\left(\mathrm{A}^2\mathrm{BC}^{-1}\right)\right]$ equals (where [.] represent greatest integral function)

A. 2
B. 5
C. 7
D. 11

Solutions

Solution: 01

Given, $|\mathrm{A}| = 3, |\mathrm{B}| = 4$ and $|\mathrm{C}| = 5$

Now, $\det\left(A^2BC^{-1}\right) = \left|A^2BC^{-1}\right| = \dfrac{|A|^2|B|}{|C|} = \dfrac{9 \times 4}{5}$

$$\left[\det\left(\mathrm{A}^2\mathrm{BC}^{-1}\right)\right] = \left[\frac{36}{5}\right] = 7$$

Correct Options

Answer:01
Correct Options: C