



MATHS

BOOKS - RESONANCE DPP ENGLISH

MATRICES

Others

1. If $P = \begin{bmatrix} 1 & 4 \\ 2 & 3 \end{bmatrix}$, then

$P^5 - 4P^4 - 7P^3 + 11P^2$ is equal to (A)

$P + 10I$ (B) $P + 5I$ (C) $2P + 15I$ (D) $P = 5I$



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2. If A and B are two non-singular square matrices obeying commutative rule of multiplication then $A^3 B^3 (B^2 A^4)^{-1} A =$ (a) A
(b) B (c) A^2 (d) B^2



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3. Let A be a 3×3 matrix satisfying $A^3 = 0$, then which of the following statement(s) are

true (a) $|A^2 + A + I| \neq 0$ (b)

$|A^2 - A + O| = 0$ (c) $|A^2 + A + I| = 0$ (d)

$|A^2 - A + I| \neq 0$



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4. If A is an 3×3 non-singular matrix such that $AA' = A'A$ and $B = A^{-1}A'$, then BB' equals (1) $I + B$ (2) I (3) B^{-1} (4) $(B^{-1})'$



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5. If the matrix satisfies the equation

$$\begin{bmatrix} 1 & -2 \\ 4 & 3 \end{bmatrix} + 2x = \begin{bmatrix} 2 & 1 & -2 \\ 0 & 1 & 3 \end{bmatrix} \begin{bmatrix} 3 & 2 \\ 1 & 4 \\ -3 & 1 \end{bmatrix},$$

then 'X' equals (a) $\begin{bmatrix} 6 & 4 \\ -6 & 2 \end{bmatrix}$ (b) $\begin{bmatrix} 6 & 4 \\ -6 & 3 \end{bmatrix}$

(c) $\begin{bmatrix} 6 & 2 \\ -6 & 3 \end{bmatrix}$ (d) $\begin{bmatrix} 7 & 2 \\ -2 & 5 \end{bmatrix}$



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6. Let $A = [1011]$. Then which of following is

not true? (a) $(\lim)_{n \rightarrow \infty} \frac{1}{n^2} A^{-n} = [00 - 10]$ b.

(c) $(\lim)_{n \rightarrow \infty} \frac{1}{n} A^{-n} = [00 - 10]$ c.

$A^{-n} = [10 - n1] \forall n \neq N$ d. none of these



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7. If the system of equations

$x + ay = 0$, $az + y = 0$ and $ax + z = 0$ has

infinite solutions, then the value of a is

(a) -1 (b) 1 (c) 0 (d) no real values



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