Quiz-31

Q.1 If a complex square matrix A satisfies $\bar{A}^T = -A$, then A= ----------.

A. Hermitian B. skew-Hermitian C. Unitary D. None of these

Q.2 If a complex square matrix A satisfies $\bar{A}^T = A^{-1}$, then A= _____.

A. Hermitian B. skew-Hermitian C. Unitary D. None of these

Q.3 The matrix $A = \begin{bmatrix} 4 & 1-3i \\ 1+3i & 7 \end{bmatrix}$ is _____.

A. Hermitian B. skew-Hermitian C. Unitary D. None of these

Q.4 The eigenvalues of a Hermitian matrix are always _____.

A. real B. perely imaginary C. complex D. None of these

Q.5 The eigenvalues of a skew-Hermitian matrix are always _____.

A. nonzero real B. perely imaginary C. complex D. None of these

Q.6 The absolute value of the eigenvalues of a unitary matrix is _____.

A. 0 B. 1 C. 2 D. 3

Q.7 The inverse of a Hermitian matrix is a _____ matrix.

A. Hermitian B. skew-Hermitian C. Unitary D. None of these