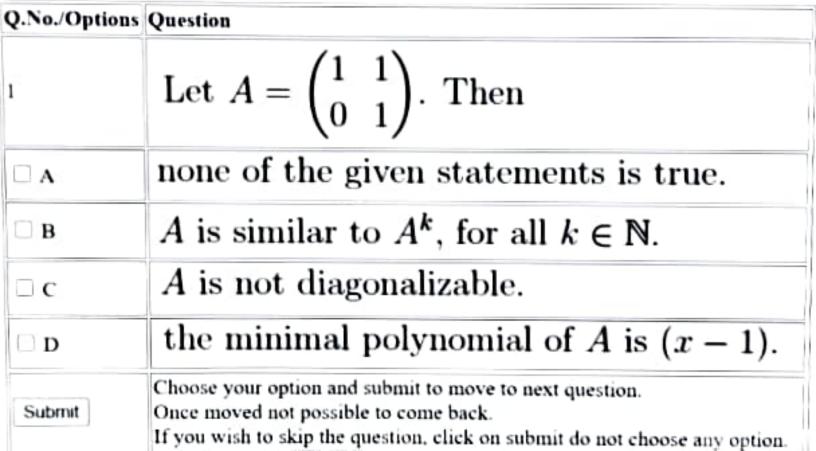
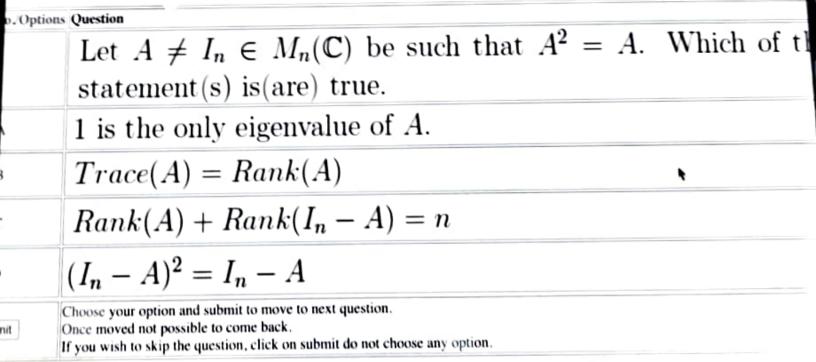
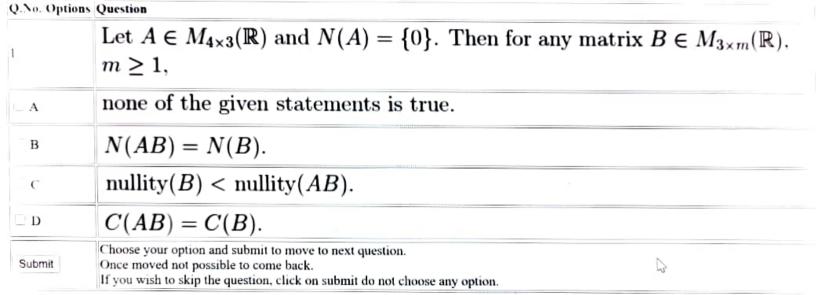
Q.No./Options Question	
1	Let $T: \mathbb{R}^n \to \mathbb{R}^n$ be a linear transformation and $A, B \in M_n(\mathbb{R})$ be matrix representations of $T$ with respect to ordered bases $\mathcal{B}_1$ and $\mathcal{B}_2$ respectively. If $B$ is an upper-triangular matrix with diagonal entries as $1, 2, \ldots, n$ . Then
A	A is invertible.
∃в	B is diagonalizable but $A$ need not be diagonalizable.
C	A and $B$ have the same eigenvalues and eigenvectors.
$\Box$ D	A is diagonalizable.

Chassassia







./Options Question Let  $A, B \in M_n(\mathbb{C})$  be non-zero matrices such that  $A^2 = A$ ,  $B^2 =$ Then  $I_n + B$  is invertible. both A and B are diagonalizable. AB is diagonalizable. A is diagonalizable but B is not. Choose your option and submit to move to next question. Once moved not possible to come back. If you wish to skip the question, click on submit do not choose any option.

Q.No./Option	ns Question
1	Let $\mathbb{C}$ be a vector space over the field $\mathbb{R}$ and $0 \neq z = a + ib \in \mathbb{C}$ . Define $T_z : \mathbb{C} \to \mathbb{C}$ such that $T_z(w) = zw$ . Then
A	$T_z$ is diagonalizable if $z$ is real.
В	$T_z$ is linear.
C	$T_z$ has no eigenvalue if $b \neq 0$ .
D	$T_z$ is always diagonalizable.
Submit	Choose your option and submit to move to next question.  Once moved not possible to come back.  If you wish to skip the question, click on submit do not choose any option.

