Do **not** put your name but please check what applies:

International	MSc	PhD	CTH	GU	Other

MPALG	MPAPP	MPCAS	MPENM	MPSYS	DATA	IT	Other

2×2 matrices $A = \left[\begin{smallmatrix} 0 & i \\ -i & 0 \end{smallmatrix}\right]$ and $B = \left[\begin{smallmatrix} 0 & 1 \\ 1 & 0 \end{smallmatrix}\right]$ with $i = \sqrt{-1}$.

1.) Write down $A \cdot A$	
2.) $A \cdot B$	
3.) $\det(A)$	
4.) $A^\dagger$	
5.) A^{T}	
6.) A^{-1}	
7.) e^A	
8.) Eigenvalues of B	
9.) Eigenvectors of B	
10.) Write down a complex unitary matrix	
11.) Matrix that cannot be diagonalised	
12.) Hermitian matrix	
13.) Expand e^{-x} for small x to second order	
14.) $(1+x)^{-1}$	