GenEd MATH 0331: Linear Algebra

Schedule of internal assessment examination for odd semester 2015

Instructor: Kuntal Banerjee, Batch B1 (Physics, Statistics, Economics)

Date of examination: 1st October 2015 (Thursday)
Time and Place of examination: 10 AM at MLT

Syllabus: Systems of Linear Equations over a field, Matrices, Row operations and reduction to Row Reduced Echelon form, Elementary Matrices, Solutions to a system of linear equations using the row reduced echelon form, matrix multiplications, invertibility of square matrices, finding inverse by row operations, equvalent criteria for invertibility of matrices, Vector Spaces, Subspaces, Linear Combinations, Span of Vectors, Linear dependence and independence, Bases, Dimensions, Standard bases of $\mathbb{R}^n$ and $\mathbb{C}^n$, Deletion theorem, Extension theorem, Row Space, Column Space, Column operations, Row rank = Column rank, Rank of a matrix, Rank(AB) $\leq$ min(Rank(A), Rank(B)), Rank Nullity theorem, Finding bases for Col(A) and Nul(A) for a given matrix A, Linear transformations or Linear maps between vector spaces, Kernel and Range of a linear map, matrix associated with a linear map.