Chapter-5
Linear Transformations

Long Type Question:

Q.1. Define range space and Kernel of a linear transformation. 2015

Sol": Diffinition : Let U(F) & V (F) be two vector space and T be a L.T. from U→V. Then the image or range of T. written as R (T). the set of all image point in V. i.e.

Image of T = R(T) = {y∈v : t(x) = y. for some x∈v}

Kernal of a L.T. : The Kernal of a L.T. or homomorphism T is the set of those elements in U which in mapped to zero vector of v by L.T. is denoted by Kev (T). Thus

Kev (T) = {x f U : T (x) = 0}

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