Assignment Test-2

Q.1 If A is a 2nd order zero matrix, then C (A) is _____.

(A) Any line passing through origin of R^2 (B) R^2 (C) Origin of R^2 (D) None of these

Q.2 If A is an m×n matrix, then the null space N (A) is a subspace of _____.

A. R^n B. R^m C. R^{mn} D. R^{m+n}

Q.3 If A=$\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$, then the nullspace N(A) is _____.

(A) Any line passing through origin of R^2 (B) R^2 (C) Origin of R^2 (D) None of these

Q.4 What is the complete solution of the following system?

$y + z = 2$

$2y + 2z = 4$

(A) x=$\begin{bmatrix} 2 \\ 0 \end{bmatrix}$ (B) x=$\begin{bmatrix} -1 \\ 1 \end{bmatrix}$ (C) x=$\begin{bmatrix} 2 \\ 0 \end{bmatrix} + z\begin{bmatrix} -1 \\ 1 \end{bmatrix}$ (D) None of these

Q.5 The row reduced echelon form of the matrix $\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ is _____.

(A) $\begin{bmatrix} 1 & 0 \\ 0 & 0 \end{bmatrix}$ (B) $\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$ (C) $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ (D) None of these

Q.6 What is the echelon form of a 2×2 matrix A= $[a_{ij}]$, where $a_{ij}= (-1)^{ij}$?

(A) $\begin{bmatrix} -1 & 1 \\ 0 & 2 \end{bmatrix}$ (B) $\begin{bmatrix} 1 & -1 \\ 0 & 1 \end{bmatrix}$ (C) $\begin{bmatrix} -1 & 1 \\ 0 & 0 \end{bmatrix}$ (D) None of these

Q.7 The system u + v + 2w = 2, 2u + 3v - w = 5, 3u + 4v + w = C

is solvable if C = ____.

A. 5 B. 7 C. 3 D. None of these

Q.8 If rank of the matrix A= $\begin{bmatrix} 3 & 1 & 3 \\ q & 1 & q \end{bmatrix}$ is 1, then q=_____.

A.3 B.6 C.2 D.0

Q.9 The two vectors $V_1=(1,2,0)$ and $V_2=(0,1,-1)$ are _____.

A. LI B. LD C. Both A and B D. None of these

Q.10 In R^n, the maximum number of LI vectors is _____.

A. 0 B. n C. n+1 D. None of these