

## Quiz-22

Q.1 The matrix  $A = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$  has \_\_\_\_\_ and \_\_\_\_\_ no. of linearly independent rows and columns respectively.

- (A) 2,1      (B) 1,2      (C) 2,2      (D) 3,3

Q.2 Which two columns of the matrix  $A = \begin{bmatrix} 1 & 2 & 3 \\ 3 & 4 & 5 \end{bmatrix}$  are linearly independent?

- (A) Only 1<sup>st</sup> and 2<sup>nd</sup>    (B) Only 1<sup>st</sup> and 3<sup>rd</sup>    (C) Only 2<sup>nd</sup> and 3<sup>rd</sup>    (D) Any two columns

Q.3 How many column(s) of the matrix  $A = \begin{bmatrix} 1 & 2 & 3 \\ 3 & 6 & 9 \end{bmatrix}$  is/are linearly independent?

- (A) 0    (B) 1    (C) 2    (D) 3

Q.4. Describe the kernel of the matrix  $A = \begin{bmatrix} 1 & 2 \\ 3 & 6 \end{bmatrix}$ .

- (A)  $\mathbb{R}^2$     (B) a line passing through origin of  $\mathbb{R}^2$     (C) origin of  $\mathbb{R}^2$     (D) None of these

Q.5 What is the nullity of the matrix  $A = \begin{bmatrix} 1 & 2 \\ 3 & 6 \end{bmatrix}$ ?

- (A) 2    (B) 1    (C) 0    (D) none of these