Assignment Test-1

Q.1 Find the values of x, y, z for the following system of equations by Gauss Elimination method.

$$2x + y - 3z = -10, -2y + z = -2, z = 6$$

(A) 2, 4, 6   (B) 2, 7, 6   (C) 3, 4, 6   (D) 2, 4, 5

Q.2 The following system has --------.

$$x - y - z = 4, 2x - 2y - 2z = 8, 5x - 5y - 5z = 20$$

(A) Unique Solution (B) No solution (C) Infinitely many Solutions (D) None of these

Q.3 The aim of elimination steps in Gauss elimination method is to reduce the coefficient matrix   into _____.

(A) diagonal (B) identity   (C) lower triangular   (D) upper triangular

Q.4 The elimination process in Gaussian elimination method is also known as _____.

(A) Forward Elimination   (B) Backward Elimination

(C) Sideways Elimination   (D) Crossways Elimination

Q.5 Which of the following property of matrix multiplication is correct?

(A) Multiplication is not commutative in general   (B) Multiplication is associative

(C) Multiplication is distributive over addition   (D) All of the above

Q.6 What value of x and y be choosen for drawing the column picture for the equations x-2y=0, x+y=6 ?

(A) x=4, y=2   (B) x=2, y= 1   (C) x=1, y=5   (D) x=3, y= 3

Q.7 For what value of a, the system of equations ax+2y=0, 2x + ay =0 have whole line of solutions ?

(A) a= 4, -4   (B) a=2, -2   (C) a=1, -1   (D) a= 3, -3

Q.8 For which numbers a does the elimination breakdown   temporarily for the system of equations ax+3y =-3 ,4x+6y=6 ?

(A) a=-1   (B) a=0   (C) a=5   (D) a=1

Q.9 If A is skew-symmetric matrix then transpose of A = _____.

A. A   B. 0   C. 1   D. -A

Q.10 The system 5x-y+z=0 , 4x-3y+7z=0 has

A. Only trivial solution   B. Unique Solution

C. No solution   D. Infinite number of solutions

Q.11 The matrix which does not have inverse is classified as

A. Non singular matrix B. Singular matrix

C. Unidentified matrix   D. Linear matrix

Q.12 Which of the following is false?

A. $\left(A+B\right)^{T} = A^{T} + B^{T}$ B. $\left(A-B\right)^{T} = A^{T} - B^{T}$

C. $\left(AB\right)^{T} = A^{T}B^{T}$ D. $\left(A^{-1}\right)^{T} = \left(A^{T}\right)^{-1}$

Q.13 For which number q the system x+4y-2z=1 , x+7y-6z =6 ,3y+qz=t   is singular

A. q=1   B. q=2   C. q=-4   D. q=3

Q.14 Solve the equation by Gauss Jordan method   x+2y+6z=22, 3x+4y+z=26,

6x-y-z=19.

A. x=4 , y=3 , z=2 B. x=4 ,y=31 ,z=11   C. x=2 ,y =4 , z=1 D. x=1 ,y= 4 , z=2

Q.15 If a matrix B is obtained by changing rows into columns and column

into rows of the matrix A, then relation between A and B is _____.

A. $A^{2} = B$ B. $A^{T} = B$ C. Depends on the matrix   D. None of the above

Q.16 If matrix A and B are symmetric and AB = BA iff _____

A. AB is a symmetric matrix   B. AB is antisymmetric matrix

C. AB is a null matrix   D. None of the mentioned