INFORMATION TECHNOLOGY UNIVERSITY, LAHORE, PAKISTAN

BS Computer and Software Engineering

Linear Algebra

Quiz# 1 (BSSE23-A), Fall 2024

September 10, 2024

Name: _Zunaira Abdul Aziz._   Roll Number: _BSSE23058._

Maximum Time Allowed: 10 minutes   Maximum Marks: 10

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1. Write down the following system of linear equations into augmented matrix form and use Gauss-Jordan method to find the solution.

$$2x_2 + 3x_3 = 8$$

$$2x_1 + 3x_2 + x_3 = 5$$

$$x_1 - x_2 - 2x_3 = -5$$

$$\begin{bmatrix} 0 & 2 & 3 & | & 8 \\ 2 & 3 & 1 & | & 5 \\ 1 & -1 & -2 & | & -5 \end{bmatrix}$$

$R1 \leftarrow R1 + R3$

$0 + 1 = 1$

$2 - 1 = 1$

$3 - 2 = 1$

$8 - 5 = 3$