🏛 BRAC University

Department of Mathematics and Natural Sciences

Total Points: 15

📋 Assignment-01

Course Code: MAT215

Complex Variables & Laplace Transform

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👥 **Section: 12**

📅 **Semester: FALL 2025**

🕐 **Submission Date:** _____

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❓ Question 1

Let $A = \begin{pmatrix} 2 & 1 \\ 3 & 4 \end{pmatrix}$. Compute the inverse of A using row reduction.

✏️ **Solution:**

❷ **Question 2**

Find the Fourier series of $f(x) = x$ defined on $[-\pi, \pi]$.

✏️ **Solution:**

❓ Question 3

Determine whether the system

$$\begin{cases} x + 2y + 3z = 1, \\ 2x + 4y + 6z = 2, \\ x - y + z = 3 \end{cases}$$

is consistent. If yes, find all solutions.

✏️ **Solution:**

❓ Question 3