

Mathematics and Statistics (ES1043)
HA1 (Date of Submission 23/12/2022)

Following points are considered for the assessment of your home assignment.

- 1) Name, Div, Roll No, PRN are mentioned on each page or not.
- 2) Neat writing, readability, presentation.
- 3) Number of questions attempted.
- 4) Necessary justification as applicable.
- 5) Conceptual mistakes.
- 6) Timely submission.
- 7) Plagiarism/copy from other person.

Question: Construct a matrix A whose order is 4×6 as per below instructions.

- 1) Write your 12 digits Aadhaar number.
- 2) Choose odd place digits (starting from left side) from Aadhaar number as the first row of A.
- 3) Second row of A is, $a_{2j} = 2a_{1j}, \quad j = 1, 2, 3, 4, 5, 6$
- 4) Third row of A is, $a_{3j} = (-1)^{3+j} a_{1j}, \quad j = 1, 2, 3, 4, 5, 6$
- 5) Fourth row of A is, $a_{4j} = -a_{1j}, \quad j = 1, 2, 3, 4, 5, 6$

Reduce above constructed matrix to row reduced (row echelon form) form.
Hence determine the rank.