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Daffodil International University

Set: 47F

Student ID: ... **Section:** .... F..... **Department:** ..... SWE..... **Quiz:** ...01...

Course Code: ..... **Course Title:** ..... **Date:** ...

Answer the following questions: **Total Marks: 15**

1.	a. If A has no zero rows in its REF, what can you say about its rank? b. If A has rank r, how many 1's appear in its normal form? c. Can a matrix with a zero row have an inverse? Explain	3× 1 = 3
2.	$A = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 2 & 9 \end{bmatrix}$ **Find** A^{-1} in two different methods.	6
3.	Construct a 3× 4 matrix T, where the first eight entries are derived from your full date of birth (using its numerical digits), and the remaining four entries are obtained from the numerical digits of your hometown's postal code., then find the **Normal Form** of the matrix and **comment about its rank** from the Normal Form.	6