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| **Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |

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| **Question Number** | **I** | **II** | **III** | **Total** |
| **Mark** |  |  |  |  |

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| **Question Number** | **1** | **2** | **3** | **4** | **5** | **6** | **Total** |
| **Answer** |  |  |  |  |  |  |  |

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| **Question I:**  **Choose the correct answer, then fill in the table above:**  **(1) If then**  **(a) 7 (b) -7 (c) (d) None of the previous**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **(2) If is a matrix and is a matrix then is**  **(a)matrix (b) matrix (c) matrix (d) None of the previous**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **(3) If matrices such that , then**  **(a) 23 (b) 26 (c) 28 (d) None of the previous**  **(4) If , then is**  **(a) invertible (b) elementary (c) non- invertible (d) None of the previous**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
| **(5) If is the augmented matrix of a linear system in the unknowns**  **, then the system has**  **(a)no solution (b) a unique solution (c)infinitely many solutions (d) None of the previous**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **(6) If then**  **(a) (b) (c) (d) None of the previous**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Question II:**  **In parts (a)–(g) determine whether the statement is true or false, and justify your answer.**  **(a) A linear system whose equations are all homogeneous must be consistent.**  **(b) The system**  **x − x y = 6**  **x − y = 8**  **is a linear system.**  **(c) Elementary matrices must be square matrices.**  **(d) For all square matrices A and B of the same size, it is true that AB=BA**  **(e)If A is an n × n matrix that is not invertible, then the linear system Ax = 0**  **has no solution.**  **(f) A symmetric matrix must be a square matrix.**  **(g) The transpose of a triangular matrix is a triangular matrix of the same kind.**  **Question III:**   1. **Let then find if it exist** |
| **B Solve the linear system**   |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  |   **c. For the following matrix**  **Find where** |