



COMSATS University Islamabad, Vehari Campus

DEPARTMENT OF MATHEMATICS 2nd Sessional Examination SP19

Time Allowed: 1½ Hrs
Max. Marks: 15

Instructor: Dr. M. Waseem
Program/ Class: BSM-B2 / BSE-B9 / BSE-B10
Course: Linear Algebra (MTH231)

Student Name: Ahmer Iqbal Registration No: SP18-BSE-002

Q 1: Find determinant (if it exists) of the following matrix (via reduction to triangular form): [5]

$$\begin{bmatrix} x & y & z \\ 1 & 1 & 1 \\ x^2 & y^2 & z^2 \end{bmatrix}$$

Q 2: Find the inverse (if it exists) of the following Matrix (using method of Co-factors): [5]

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

Q 3: Let V be the set of all integers; with the operations: \oplus define by $u \oplus v = u + v$ and \odot define by $c \odot v = cv$. Is V a vector space? [5]

Ahmer Iqbal
19