**SCSA3016 DATA SCIENCE**

**Assignment I**

**Fill in the Blanks:**

1) If A is a 3x3 matrix, then in terms of det(A), we can say that det(−2A) =\_\_\_\_\_\_\_\_\_\_\_\_\_

2) If Ax=b has a unique solution for some particular b then A is invertible (T/F)\_\_\_\_\_\_\_\_\_\_\_\_\_

3) The concept of Eigen values and vectors is applicable to\_\_\_\_\_\_\_\_\_

4) A system with more equations than variables is called  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5) A linear equation in three variables represents a \_\_\_\_\_\_\_\_\_\_

**Short Questions:**

1) What is vector and give the geometric representation of vector?

2) Find the determinant of the given matrix A=

3) What is the rank of the given matrix A=

4) Define Null space

5) What is equation of a line

**Long Questions:**

1. Find the Eigen values and eigen vectors for the given matrix

**Instructions:**

1) Use A4 sheets for writing your assignments

2) Scan and send your assignment in any format preferably pdf and upload correct document 3) Save your assignment in file name (Register Number\_Name) eg: (39110018\_AARUSH)

4) For fill ups just write the answer alone