DSA LAB SESSIONAL EXAM.
PROGRAM TEST

TOTAL: 30 Marks **TIME: 1 Hr.**

CS-36 GR-2

Part-I: (5 marks writing + 10 marks execution):

Write a C program to do the following operation of linked list:

a) Convert two user input sparse matrices into triplets.

b) Multiplication of those triplets and store them in another triplet.

c) Again, convert the resultant triplet to its corresponding sparse matrix.

Part-II: (5 marks writing + 10 marks execution):

Write a C program to implement a special QUEUE (Q). It is a FIFO data structure. If the size of the Q is m=10. The permissible operations are:

1. It only allows alphabets; e.g., T, G, K, D, A, P, J, V
2. Search an alphabet using a division hash function (%11);
3. Once the Q becomes FULL, it stops FIFO and behaves like a LIFO.