Q-1 Answer the following question

A   What do you mean by data structure? Give types of data structure and   7
    define it.

B   What do you mean by representation of data? Explain basic concept of   7
    data representation.

OR

A   Explain concept of time and space analysis of algorithm in brief.   7

B   Explain abstract data type and derive data type.   7

Q-2 Answer the following question

A   Explain top down approach of algorithm design. Give advantages and   7
    disadvantages of it.

B   What do you mean by algorithm? Give features and advantages of   7
    algorithm.

OR

A   Explain bottom up approach of algorithm design? Give advantages and   7
    disadvantages of it

B   Write note on structured approach of programming   7

Q-3 Answer the following question.

A   What do you mean by array? Explain representation of 1-D and 2-D Array.   7

B   Write a C-program to perform addition of two 3 X 3 I array.   7

OR

A   Give various application of array.   7

B   Write a C-program to perform multiplication of two 3 X 3 array.   7

Q-4 Answer the following question

A   What do you mean by stack? Explain PUSH and POP operation on stack.   7

B   What do you mean by queue? Write note on circular queue.   7

OR

A   Write note on priority queue and D-Queue.   7

B   Write note on application of stack.   7

Q-5 Answer the following question

A   What do you mean by linked list? Write note on single linked list.   7

B   Write algorithm of insert and delete operation on single linked list.   7

OR

A   Write note on double linked list.   7

B   Write algorithm on insert and delete operation on double linked list.   7