- What is an algorithm? Explain with its characteristics and example.
- Define data structure. Classify data structure.
- Explain data structure operations and list the importance of data structures.
- Explain an Abstract Data Type.
- Discuss on time and space complexity of algorithms with examples.
- Define the worst case, best case and average case complexities with examples.
- Write short notes on asymptotic notations.
- Explain Stack data structure with its applications.
- Write down the algorithms for push and pop operations on stack.
- Explain stack as an ADT.
- Write down the algorithms for converting
- Infix expression to postfix expression. b) Infix expression to prefix expression.
- Write down the algorithms for evaluating:
- Postfix expression b) Infix expression c) Prefix expression6.
- Translate the following infix expression into its equivalent postfix expression using algorithm:((A-(B+C))*D)$(E+F)7.
- Evaluate the following postfix expression:AB+C*DEFG*+/+H-, Where A=4, B=8, C=2, D=5, E=6, F=9, G=1, H=3
- Explain queue data structure with its applications.
- Explain queue as an ADT.
- Differentiate between linear and circular queue
- Write down the algorithms for enqueue and dequeue operation in a linear queue.
- Write down the algorithms for enqueue and dequeue operation in a circular queue.
- Explain the priority queue with its operations and applications
- Given are two one-dimensional arrays A and B which are stored in ascending order.Write a program to merge them into a single sorted array C that contains every item fromarrays A and B, in ascending order.
- Twentyfive numbers are entered from the keyboard into an array. Thenumber to be searched is entered through the keyboard by the user. WAP tofind if the number to be searched is present in the array and if it is present,display the number of times it appears in the array.