

UNIT - 2	
Part – A (Short Answer Questions)	
1	<b>Define</b> Stack.
2	<b>List</b> the applications of stack
3	<b>Define</b> Queue.
4	<b>List</b> the applications of queue
5	<b>Differentiate</b> Stack and Queue
6	<b>List</b> out the basic operations that can be performed on a stack and queue
7	<b>List</b> the different types of queues
8	<b>Define</b> Circular Queue
9	<b>List</b> the operations that can be performed on Circular Queue
10	<b>Define</b> Circular Queue full condition
11	<b>Define</b> DEQUEUE
12	<b>List</b> the operations that can be performed on DEQUEUE
13	<b>State</b> the different ways of representing expressions
14	<b>State</b> the rules to be followed during infix to postfix conversions
15	<b>Convert</b> the infix expression $(a+b)-(c*d)$ into post fix form
16	<b>List</b> how Stacks and Queues are represented in data structure
17	<b>Discuss</b> which data structure used in recursion
18	<b>Explain</b> the difference between stack implementation using array and linked list
19	<b>Write</b> the necessity of infix to post fix conversion
20	<b>Write</b> the Dequeue empty condition
Part - B (Long Answer Questions)	
1	<b>Write</b> an algorithm for basic operations on Stack
2	<b>Explain</b> the procedure to evaluate postfix expression
3	<b>Evaluate</b> the following postfix expression: $6\ 2\ 3\ +\ -\ 3\ 8\ 2\ /\ +\ * \ 2\  \ 3\ +$
4	<b>Explain</b> the procedure to convert infix expression into postfix expression
5	<b>Convert</b> the following expression $A + (B * C) - ((D * E + F) / G)$ into post form.
6	<b>Explain</b> the operations on simple Queue
7	<b>Write</b> an algorithm for basic operations on circular queue
8	<b>Explain</b> DEQUEUE and its operations
9	<b>Implement</b> a queue using two stacks.
10	<b>Implement</b> a Circular queue of integer of user specified size and write the functions for initialize () enqueue () and dequeue()
Part – C (Problem Solving and Critical Thinking)	
1	<b>Convert</b> the expression $((A + B) * C - (D - E) ^ (F + G))$ into equivalent Postfix notation.
2	<b>Transform</b> the following expression to postfix expression using stacks. $(a+b)*((d-e)+f)$
3	<b>Convert</b> infix expression into its equivalent post fix expression $A*(B+D)/E-F*(G+H/K)$

4	<b>Transform</b> the following expression to postfix expression using stacks. $(A+B)*(C*(D-E)+F)-G$
5	<b>Write</b> a C program that uses stack operations to convert a given infix expression into its postfix Equivalent.
6	<b>Evaluate</b> the postfix expression $6\ 2\ 3\ +\ -\ 3\ 8\ 2\ /\ +\ * \ 2\ \$\ 3\ +$
7	<b>Evaluate</b> the postfix expression $1\ 2\ +\ 3\ *\ 6\ +\ 2\ 3\ +\ /\$
8	<b>Evaluate</b> the postfix expression $10\ 2\ 8\ *\ +\ 3\ -\ 1\ 2\ 3\ *\ +\ -$
9	<b>Write</b> C programs to implement stack using Arrays
10	<b>Write</b> C programs to implement stack using Linked List
11	<b>Write</b> C programs to implement queue using Arrays
12	<b>Write</b> C programs to implement queue using Linked List
13	Write an algorithm for basic operations on simple queue