Q1.Implement a list library (doublylist.h) for a doubly linked list of integers with the create, display operations. Write a menu driven program to call these operations. [10]

Q2. Write a program that sorts the elements of linked list using any of sorting technique. [20]

Q3. Viva [5]

Q1. Implement a list library (singlylist.h) for a singly linked list of integer with the operations create, display. Write a menu driven program to call these operations   [10]

Q2. Write a program that copies the contents of one stack into another. Use stack library to perform basic stack operations. The order of two stacks must be identical.(Hint: Use a temporary stack to preserve the order).   [20]

Q3. Viva   [5]

Q1. Sort a random array of n integers (accept the value of n from user) in ascending order by using insertion sort algorithm. [10]

Q2. Write a C program to evaluate postfix expression. [20]

Q3. Viva [5]

SLIP 3

Q1. Read the 'n' numbers from user and sort using bubble sort. [10]

Q2. Write a program to reverse the elements of a queue using queue library.
Implement basic queue operations init, enqueue, dequeue. [20]

Q3. Viva [5]

SLIP 4

Q1. Create a random array of n integers. Accept a value x from user and use linear search algorithm to check whether the number is present in the array or not and output the position if the number is present.   [10]

Q2. Implement a priority queue library (PriorityQ.h) of integers using a static implementation of the queue and implement the below two operations.

   1) Add an element with its priority into the queue.
   2) Delete an element from queue according to its priority.   [20]

Q3. Viva   [5]

Q1. Sort a random array of n integers (accept the value of n from user) in ascending order by using selection sort algorithm. [10]

Q2. Implement a queue library (dyqueue.h) of integers using a dynamic (linked list) implementation of the queue and implement init, enqueue, dequeue, isempty, peek operations. [20]

Q3. Viva [5]

SLIP 6

Q1. Sort a random array of n integers (accept the value of n from user) in ascending order by using quick sort algorithm.   [10]

Q2. Write a program that checks whether a string of characters is palindrome or not. The function should use a stack library (cststack.h) of stack of characters using a static implementation of the stack.   [20]

Q3. Viva   [5]

SLIP 7

Q1. Implement a list library (singlylist.h) for a singly linked list of integer With the operations create, delete specific element and display. Write a menu driven program to call these operations [10]

Q2. Write a C program to check whether the contents of two stacks are identical. Use stack library to perform basic stack operations. Neither stack should be changed. [20]

Q3. Viva [5]

Q1. Write a program to convert an infix expression of the form (a*(b+c)*((d-a)/b)) into its equivalent postfix notation. Consider usual precedence's of operators. Use stack library of stack of characters using static implementation.

[10]

Q2 Read the data from the 'employee.txt' file and sort on age using Counting sort or Quick sort and write the sorted data to another file 'sortedemponage.txt'.

[20]

Q3 Viva [5]

Q1. Implement a linear queue library (st_queue.h) of integers using a static implementation of the queue and implementing the init(Q), add(Q) and peek(Q) operations. Write a program that includes queue library and calls different queue operations [10]

Q2. Read the data from the file "employee.txt" and sort on names in alphabetical order (use strcmp) using bubble sort or selection sort. [20]

Q3 Viva [5]

Q1. Accept n values in array from user. Accept a value x from user and use sentinel linear search algorithm to check whether the number is present in the array or not and output the position if the number is present. [10]

Q2. Implement a priority queue library (PriorityQ.h) of integers using a static implementation of the queue and implementing the below two operations. Write a driver program that includes queue library and calls different queue operations.

    1) Add an element with its priority into the queue.
    2) Delete an element from queue according to its priority. [20]

Q3 Viva [5]

Q1. Read the data from file 'cities.txt' containing names of cities and their STD codes. Accept a name of the city from user and use linear search algorithm to check whether the name is present in the file and output the STD code, otherwise output "city not in the list".   [10]

Q2. Implement a circular queue library (cir_queue.h) of integers using a dynamic (circular linked list) implementation of the queue and implementing init(Q), AddQueue(Q) and DeleteQueue(Q) operations. Write a menu driven program that includes queue library and calls different queue operations. [20]

Q3 Viva   [5]

Q1. Implement a stack library (ststack.h) of integers using a static implementation of the stack and implementing the operations like init(S), S=push(S) and S=pop(S). Write a driver program that includes stack library and calls different stack operations. [10]

Q2. Write a program that sorts the elements of linked list using bubble sort technique. [20]

Q3 Viva [5]

Q1. Create a random array of n integers. Accept a value x from user and use linear search algorithm to check whether the number is present in the array or not and output the position if the number is present.   [10]

Q2. A doubly ended queue allows additions and deletions from both the ends that is front and rear. Initially additions from the front will not be possible. To avoid this situation, the array can be treated as if it were circular. Implement a queue library (dstqueue.h) of integers using a static implementation of the circular queue and implementing the following operations.   [20]

   a. isFull(Q)
   b. addFront(Q)
   c. getRear(Q)
   d. deleteRear(Q)

Q3. Viva   [5]

Q1. Sort a random array of n integers (accept the value of n from user) in ascending order by using selection sort algorithm. [10]

Q2. Implement a linear queue library (dyqueue.h) of integers using a dynamic (circular linked list) implementation of the queue and implementing the queue operations as (init(Q), AddQueue(Q, x), X=peek(Q)) [20]

Q3. Viva [5]

Q1. Sort a random array of n integers (accept the value of n from user) in ascending order by using Counting sort algorithm.   [10]

Q2. A postfix expression of the form ab+cd-*ab/ is to be evaluated after accepting the values of a, b, c and d. The value should be accepted only once and the same value is to be used for repeated occurrence of same symbol in the expression. Formulate the problem and write a C program to solve the problem by using stack   [20]

Q3. Viva   [5]

Q1 Implement a list library (singlylist.h) for a singly linked list. Create a linked list, reverse it and display reversed linked list.   [10]

Q2 Write a program that copies the contents of one stack into another. Use stack library to perform basic stack operations. The order of two stacks must be identical.(Hint: Use a temporary stack to preserve the order).   [20]

Q3. Viva   [5]

Q1. Sort a random array of n integers (accept the value of n from user) in ascending order by using Selection sort algorithm   [10]

Q2. Write a program that multiply two single variable polynomials. Each polynomial should be represented as a list with linked list implementation

[20]

Q3. Viva   [5]

Q1. Sort a random array of n integers (accept the value of n from user) in ascending order by using selection sort algorithm [10]

Q2. There are lists where insertion should ensure the ordering of data elements. Since the elements are in ascending order the search can terminate once equal or greater element is found. Implement a doubly linked list of ordered integers (ascending/descending) with insert, search and display operations. [20]

Q3. Viva [5]

Q1. Implement a stack library (ststack.h) of integers using a static implementation of the stack and implementing the operations like init(S), S=push(S), isFull(S). Write a driver program that includes stack library and calls different stack operations. [10]

Q2. There are lists where new elements are always appended at the end of the list. The list can be implemented as a circular list with the external pointer pointing to the last element of the list. Implement singly linked circular list of integers with append and display operations. The operation append(L, n), appends to the end of the list, n integers either accepted from user or randomly generated. [20]

Q3. Viva [5]

Q1. Write a program that reverses a string of characters. The function should use a stack library (cststack.h). Use a static implementation of the stack. [10]

Q2. Read the data from the file "employee.txt" and sort on names in alphabetical order (use strcmp) using insertion sort or selection sort [20]

Q3. Viva [5]

Q1. Implement a linear queue library (st_queue.h) of integers using a static implementation of the queue and implementing the operations like init (Q), AddQueue(Q, x) and X=DeleteQueue(Q). Write a program that includes queue library and calls different queue operations.   [10]

Q2. Read the data from file 'cities.txt' containing names of cities and their STD codes. Accept a name of the city from user and use sentinel linear search algorithm to check whether the name is present in the file and output the STD code, otherwise output "city not in the list".   [20]

Q3. Viva   [5]

Q1. Implement a priority queue library (PriorityQ.h) of integers using a static implementation of the queue and implementing the below operation   [10]

Add an element with its priority into the queue

Q2. Read the data from file 'sortedcities.txt' containing sorted names of cities and their STD codes. Accept a name of the city from user and use binary search algorithm to check whether the name is present in the file and output the STD code, otherwise output "city not in the list".   [20]

Q3. Viva   [5]

Q1. Implement a circular queue library (cir_queue.h) of integers using a static (linked list) implementation of the queue and implementing the operations like init (Q), AddQueue(Q, x) and X=peek (Q)). Write a menu driven program that includes queue library and calls different queue operations.

[10]

Q2. Read the data from the file "employee.txt" and sort on names in alphabetical order (use strcmp) using insertion sort or selection sort.   [20]

Q3. Viva   [5]

Q1. Read the data from the 'employee.txt' file and sort on age using Count sort and write the sorted data to another file 'sortedemponage.txt'.
[10]

Q2. Write a program to convert an infix expressionof the form (a*(b+c)*((d-a)/b)) into its equivalent postfix notation. Consider usual precedence's of operators. Use stack library of stack of characters using static implementation

[20]

Q3 Viva   [5]

SLIP 25

Q1. Implement a stack library (ststack.h) of integers using a static implementation of the stack and implementing the operations like init(S), S=Push(S,x) and isEmpty(S). Write a driver program that includes stack library and calls different stack operations. [10]

Q2. There are lists where insertion should ensure the ordering of data elements. Since the elements are in ascending order the search can terminate once equal or greater element is found. Implement a singly linked list of ordered integers(ascending/descending) with insert, search, and display operations. [20]

Q3. Viva [5]

SLIP 26

Q1. Read the data from the file and sort on names in alphabetical order (use strcmp) using Merge sort and write the sorted data to another file 'sortedemponname.txt'   [10]

Q2. Write a program that adds two single variable polynomials. Each polynomial should be represented as a list with linked list implementation.

[20]

Q3. Viva   [5]

Q1. Implement a stack library (ststack.h) of integers using a static implementation of the stack and implementing the above six operations. Write a driver program that includes stack library and calls different stack operations.

[10]

Q2. Read the data from the 'employee.txt' file and sort on age using Merge sort or Quick sort and write the sorted data to another file 'sortedemponage.txt'.

[20]

Q3. Viva   [5]

Q1. Implement a stack library (ststack.h) of integers using a static implementation of the stack and implementing the operations like init(S), S=push(S), and X=peek(S). Write a driver program that includes stack library and calls different stack operations. [10]

Q2. There are lists where new elements are always appended at the end of the list. The list can be implemented as a circular list with the external pointer pointing to the last element of the list. Implement singly linked circular list of integers with append and display operations. The operation append(L, n), appends to the end of the list, n integers accepted from user. [20]

Q3. Viva [5]

Q1. Read the data from the file "employee.txt" and sort on names in alphabetical order (use strcmp) using bubble sort   [10]

Q2. Write a program that merges two ordered linked lists into third new list. When two lists are merged the data in the resulting list are also ordered. The two original lists should be left unchanged. That is merged list should be new one. Use linked implementation.   [20]

Q3. Viva   [5]