VIT

UNIVERSITY

(Estd. u/s 3 of UGC Act 1956)

Vellore - 632 014, Tamil Nadu, India

SCHOOL OF COMPUTING SCIENCE AND ENGINEERING

CSE220 – Data Structures and Algorithms Lab

CYCLE SHEET-I

(FALL SEMESTER 2015-16)

1. Write a C program to implement various operations of linear list using arrays.

2. Create a structure for books (book title, author, pages, year) and stack the books one over the other such that the resulting stack has the books arranged in the order of year of publication. (Don't do sorting of the stack)

3. Create a structure Job (job title, file type, size, author). Write a C program to implement the scheduling of jobs to a printer on the basis of first come first serve. Provide options to add a job, cancel a job and display the status of jobs

4. Design a C program for consulting a doctor in a clinic on priority basis. (Get patient Name and assign priority for them. Those who are having higher priority they will avail service first.)

5. Write a C program to evaluate the given postfix expression using Stack

6. Design a C program for Student Database using Single linked list and perform search, Insert and delete operation for a particular register number.

7. Write a C program to perform all insertion, Deletion and search operation in an employee database using doubly linked list.

8. Write a C program to implement
   i) Stack using linked list
   ii) Queue using linked list.

9. Take the details(name, regno, address) of students of a class who have opted for Bus pass, and bubble sort the details based on name or regno or city by giving option to the user. (Register numbers should be alpha numeric and unique)

10. Create a list of employee name and phone numbers and sort them using **insertion sort**. Ensure that the sorting is done each time a new record gets inserted.

11. Get the CGPA of students of a class in random order and find the nth greatest CGPA by using **selection sort**.

12. Obtain the temperature of places in Fahrenheit and arrange them in descending order by using **diminishing insertion sort.**

13. Get the name, age and address of students who enrolled for admission of a certificate course and order them based on their age by finding the **pivot**.

14. Create two linked lists L1 and L2 and **merge** them using Merge sort.

15. Create a telephone directory application and maintain the names and telephone numbers. Get the name of the person whose number to be searched and search through a portion of the array using **indexed sequential search.**

16. Create a dictionary application by having words and its meaning. Perform the task of searching the dictionary for a word using **binary search.**