KANDI RAJ COLLEGE
BSC SEM III [GEN]
(COMPUTER SCIENCE)
PRACTICAL EXAM [UG-G-CC-L-301C]
ANALYSIS OF ALGORITHMS AND DATA STRUCTURES [CC-1C][OLD SYLLABUS]

TIME -60 minutes

Full Marks : 20[Experiment(s): 10; Notebook: 5; Viva: 5]

ANSWER ANY TWO QUESTIONS: (2X5=10)

1. Write a program in C to find out whether a matrix is symmetric or not.

2. Write a program that implements insertion sort for a linked list of integers.

3. Write a C program which implement Bubble sort.

4. Write a program in C which implement POP and PUSH operations.

KANDI RAJ COLLEGE
BSC SEM V [GEN]
(COMPUTER SCIENCE)
PRACTICAL EXAM [UG-G-CC-L-301C]
DATABASE MANAGEMENT SYSTEMS [CC-1C][NEW SYLLABUS]

TIME -60 minutes

Full Marks : 20[Experiment(s): 10; Notebook: 5; Viva: 5]

ANSWER ANY ONE QUESTION [EITHER Q1(a to e) OR Q2(a to e)]:   (2X5=10)

1.

a) Write code in SQL which creates a EMPLOYEES table with an ID as a primary key and NOT NULL are the constraints showing that these fields cannot be NULL

```
---------+--------------+------+-----+---------+-------+
| Field   | Type         | Null | Key | Default | Extra |
+---------+--------------+------+-----+---------+-------+
| ID      | int(11)      | NO   | PRI |         |       |
| NAME    | varchar(30)  | NO   |     |         |       |
| AGE     | int(11)      | NO   |     |         |       |
| ADDRESS | char(25)     | YES  |     | NULL    |       |
| SALARY  | decimal(19,2)| YES  |     | NULL    |       |
```

b) Next insert atleast 5 records in the same table.

c) Write SQL code which would fetch the ID, Name and Salary fields from the EMPLOYEES table, where the salary is greater than 2000.

d) Write SQL code which would fetch the ID, Name and Salary fields from the EMPLOYEES table, where the salary is greater than 2000 and the age is less than 25 years.

e) Write SQL code which will DELETE a customer, whose ID is 6.

2. a) Write code in SQL which creates a EMPLOYEES table with an ID as a primary key and NOT NULL are the constraints showing that these fields cannot be NULL

```
---------+--------------+------+-----+---------+-------+
| Field   | Type         | Null | Key | Default | Extra |
+---------+--------------+------+-----+---------+-------+
| ID      | int(11)      | NO   | PRI |         |       |
| NAME    | varchar(30)  | NO   |     |         |       |
| AGE     | int(11)      | NO   |     |         |       |
| ADDRESS | char(25)     | YES  |     | NULL    |       |
| SALARY  | decimal(19,2)| YES  |     | NULL    |       |
```

b) Next insert at least 6 records in the same table.

c) Write SQL code which would sort the result in an ascending order by NAME and SALARY.

d) Write SQL code which would display all the records from the EMPLOYEES table, where the SALARY starts with 200.

e) Write SQL code which would fetch the ID, Name and Salary fields from the EMPLOYEES table for a customer with the name Kabir.