VCD 210015 TyBsc(Maths) Computer Prog. &Syst.Aanalysis (2½ hours)SEM-V Marks :75

N.B. (1) **All** Questions are **compulsory**.

(2) Figures to the right indicate **Full marks**.

Q.1 A) Attempt any **Two**   4

1) What is the purpose of for loop?

2) What is the use of && operator?

3) What is the purpose of ++, -- operator?

B) Attempt any **Two**   6

1) Explain strch() function with suitable example.

2) Write a note on Nested if ---else.

3) write a loop that will calculate and print the square of every third integer beginning with 3. for all values less than 100.

C) Attempt any **One**

1) Write a program in C to input an integer and find whether the number is   5 divisible by 7 or not.

2) Write a program in C to input an integer and find whether the number is a prime or not.

Q.2 A) Attempt any **Two**   4

1) What is an array?

2) What is header file?

3) What is the use of escape sequence \t and \n?

B)Attempt any **Two**   6

1) printf() function and scanf() function.

2) Write a short note on identifiers in C.

3) State the output of the following program giving step by step execution.

```
int x, y , t ;
printf("Enter two positive integers");
scanf("%d %d",&x,&y);
t=x;
x=y;
y=t;
printf("x is %d and y is %d \n",x, y);
```

C) Attempt any **One**   5

1) Write a program in C to find the series 1+2+3+ ....+100.

2) Write a program in C to input names of a persons and arrange these names in ascending order.

Q.3 A) Attempt any **Two**

Create table employee with following specification.

emp_no (int). emp_name varchar(20). emp_sal (int)

1) Insert 3records in the employee table
2) Display all fields.
3) Drop the table.

B) Attempt any **Two**

i) Explain the following functions in SQL with suitable example.
   Max(),Min(), Lower().
ii) Explain the following SQL commands
   update. delete. alter.
iii) Write a sql query for the following :
   Create a table called product containing the columns(P_no int.
   name varchar2(10). price(5,2)), with the following constraint.
   i)   P_no is primary key.
   ii)   Price should be by default ten.

C) Attempt any **One**

(1) Write a note on DDl and DML
(2)(a) Write a queries in SQL.
   (i) To remove the leading blank spaces from the string " College"
   (ii) To display the square root of 27.
(b) Write a short note on DBMS

Q.4 A) Attempt any **Two**

i) How to write a comments in PL/SQL code? Explain with example.
ii) Explain the types of loop in PL/SQL.
ii) Explain case statement in PL/SQL block.

B) Attempt any **Two**

i) Write down the different data types in PL/SQL with one example each.
ii) Write a short note with reference to the SQL that explain the Distinct and All
iii) Explain group by & having clause.

C) Attempt any **One**

(1) Write a PL/SQL block to find the sum of first 10 natural numbers.
(2) Write a SQL statement to create table student having attributes
   Sid(int), name varchar2(15), Faculty varchar2(10)
   (i)   To display all rows where student ID is 1002.
   (ii)   To display students name in Upper Case.

Q.5 Attempt any **Five**   15

    (a) State the output of the following program

```
int i=0. x=0;
for(i=1;i<10;i++)
{
        If(i%2==1)
                x=x+1;
        else
                x--;
        printf("%d",x);
        continue;
}printf("x=%d",x);
```

    (b) Explain the term mapping cardinalities with example.

    (c) Explain the Attribute and Entity with reference to the SQL.

    (d) Write a PL/SQL code block that uses a simple loop such that all natural numbers from one are printed and message is displayed when loop exceeds 9.

    (e) Write a PL/SQL code to accept a number from user and find and print whether it is even or odd.

    (f) Write a C program to interchange the variable without using temporary variable.

    (g) Explain first Normal Form (1 NF) with example.

    (h) Give the difference between
        i) sum() and count()
        ii) Ltrim() and Rtrim().