This Question Paper consists of **6** questions and **7** printed pages.

Roll No. | | | | | | | | | | | | |

Code No. 55/ASS/3

SET A

COMPUTER SCIENCE
(330)

Day and Date of Examination _____

Signature of Invigilators 1. _____

2. _____

General Instructions :

1 Candidate must write his/her Roll Number on the first page of the Question Paper.

2 Please check the Question Paper to verify that the total pages and total number of questions contained in the Question Paper are the same as those printed on the top of the first page. Also check to see that the questions are in sequential order.

3 Making any identification mark in the Answer-Book or writing Roll Number anywhere other than the specified places will lead to disqualification of the candidate.

4 Write your Question Paper Code No. **55/ASS/3, Set-A** on the Answer-Book.

COMPUTER SCIENCE

(330)

Time : **3** Hours] [Maximum Marks : **60**

Note : (i) Answer **all** questions.

(ii) Marks allotted to each question are given in the right-hand margin.

(iii) Use C++ programming language to answer programming questions.

1 (a) Define the following : **1×2=2**

(i) EDI

(ii) LAN

(b) List the four activities that may be performed during manipulation of data. **2**

(c) Name any two utilities provided by Windows operating system. **1**

2 (a) Give **two** differences between the following : **2×3=6**

(i) Primary Memory and Secondary Memory.

(ii) Peer to Peer and Client Server Architecture

(iii) Dial Up and Leased Connection

(b) Give one advantage and one disadvantage of procedural language over assembly level language. **2**

(c) 'Java is architecture - Neutral.' **2**
What do you mean by the given statement?

3 (a) Name the header files to which the following built in functions belong : **1×2=2**

(i) POW( )

(ii) getchar( )

(b) Define the following with respect to OOP. **1×2=2**

(i) Class

(ii) Object

(c) Name any **two** programming applications of OOP. **2**

(d) Differentiate between the following : **2×2=4**

(i) Local and Global variables

(ii) Logical and Relational operators

(e) Write a program to accept a number n and print the sum of the following series : **4**

1 + 3 + 5 + 7 + ... n

4 (a) Explain Inline function with an example. **2**

(b) Find the syntax errors from the following program. Justify each error. **2**

```
#include(iostream.h)
int num=10
void main()
{
int a1=11;
exam(a2);
}
void exam(int var)
{
cout<<var++;
};
```

(c) Write the output of the following program : 3

```
#include<iostream.h>
void display(int & v1, int v2=10)
{
    for (int x=1; x<=2; x++)
    {
        cout<< ++ v1 << '*' << v2 - - << endl ;
        cout<< - - v2 << '*' << v1 ++ << endl ;
    }
}
void main()
{
    int a=5, b=6;
    display(a);
    cout<<"The latest values are"<<a<<"and"<<b<<endl;
}
```

(d) Write a function CHECK( ) in C++ which accepts a character and changes its case. If it is an uppercase alphabet, converts it to lower case and vice versa. If the entered character is not an alphabet, then '*' is displayed. 3

(e) Rewrite the following code using ternary operator. 1

```
if((a%100)==0)
    cout<<"sun";
else
    cout<<"moon";
```

5 (a) Write a program to search an element in an integer array using binary search. 4

(b) Define a class HOTEL in C++ with the following description : 3

Private members :

Rno and no_days of type int

Customer_Name as character array

Tarrif_per_day of type float

CALC( ) A function to calculate and return Amount as no_days*Tarrif_per_day

Public Members :

Checkin( ) //A function to accept Rno, customer name, no of days and tariff per day

Checkout( ) // A function to display Rno, Name, Tarrif per day, no of days and Amount

(c) Answer the question (i) to (iii) based on the following : 3

```
class Book
{
    char Title[20];
    char Author[20];
    int noofpages;
public:
    void read();
    void show();
};
```

```
class TextBook: private Book
{   int noofchap, noofassignments;
    protected:
        int standard;
    public:
        void readtextbook();
        void showtextbook();
}
class Physicsbook:public Textbook
{
char Topic[20];
public:
        void readphysicsbook();
        void showphysicsbook();
};
```

(i) Name the members, which are accessible from the member functions of class Physicsbook.

(ii) Write the names of members, which are accessible by an object of class Textbook.

(iii) Which type of inheritance is shown in the above code?

6 (a) What is the use of Typedef statement? **1**

(b) Declare a structure AIRLINE having the following members : **2**

Flight_No of type integer

Dep_dt of type string

Dep_city of type string

Price of type float

Write a program to accept the data of the entire structure using a pointer instance of the structure.

(c) Write a function in C++ to add new objects at the bottom of a binary file "STUDENT.DAT", assuming the binary file is containing the objects of the following class. **3**

```
class STUD
{       intRno;
    char Name[20];
public:
    void Enter(){cin>>Rno;gets(Name);}
    void Display(){cout<<Rno<<Name<<endl;}
};
```

(d) Differentiate between seekg( ) and tellg( ). **2**

(e) Explain this pointer with an example. **2**