

KCP SIDDHARTHA ADARSH RESIDENTIAL PUBIC SCHOOL
KANURU::VIJAYAWADA

UNIT TEST - III

Sub: Computer Science
Class: XII

Duration: 90 Min
Max. Marks: 30

Instructions:

All questions are compulsory.
Programming language C++.

- 1) Find the output of the following program (Assuming that all required header files are included) **3**

```
void main( )
{
    char NAME = "admiNStrAtiOn";
    for( int x=0;x<strlen(NAME);x++)
        if(islower(NAME[x])
            NAME[x] = toupper(NAME[x]);
        else
            if(isupper (NAME[x]))
                if(x%2==0)
                    NAME[x] = NAME[x -1];
                else
                    NAME[x]--;
            cout<<NAME <<endl;
}
```

- 2) (a) Name the different forms of Inheritance .How are they different from one another 2
(b) Answer the questions (i) to (iv) based on the following code: 6

```
class Employee
{
    int id;
protected :
    char name[20];
    char doj[20];
public :
    Employee();
    ~Employee();
    void get();
    void show();
};
class Daily_wager : protected Employee
{
    int wphour;
protected :
    int nofhworked;
public :
    void getd();
    void showd();
};
```

```

};
class Payment : private Daily_wager
{
    char date[10];
    protected :
        int amount;
    public :
        Payment();
        ~Payment();
        void show();
};

```

- (i) Name the type of Inheritance depicted in the above example.
- (ii) Name the member functions accessible through the object of class Payment.
- (iii) Name the data members which are not accessible through the object of class Daily_wager
- (iv) From the following, Identify the member function(s) that can be called directly from the object of class Daily_wager class
 - show()
 - getd()
 - get()
- (v) How many bytes will be required by an object belonging to class Payment?
- (vi) Name the members that are accessible by the member functions of class Payment

(c) In what order are class constructors and class destructors called when a derived class object is created and destroyed ? 2

(d) What is function overriding in C++? 2

3 (a) Observe the program segment given below carefully and answer the question that follows 1

```

class school
{ private:
    char name[25];
    int numstu;
    public:
        void inschool( );
        void outschool( );
        int retnumstu( )
        { return numstu; }
};

void modify(school A)
{ fstream INOUT;
    INOUT.open("school.dat",ios::binary|ios::in|ios::ate);
    school B;
    int recread=0, found=0;
    while(!found && INOUT.read((char*)&B,sizeof(B))
        { recread++;
            if(A.retnumstu( ) == B.retnumstu( ))

```

```

        {
            _____//missing statement

            INOUT.write((char*)&A,sizeof(A));
            Found=1;
        }
    else
        INOUT.write((char*)&B,sizeof(B));
    }
    if(!found)
        cout<<"\nRecord for modification does not exist";
    INOUT.close( );
}

```

If the function modify() is supposed to modify a record in file school.dat with the values of school A passed to its argument, write the appropriate statement for missing statement using seekp() or seekg(), whichever needed, in the above code that would write the modified record at its proper place.

- b) Write a function RevText() to read a text file “ Input.txt “ and Print only word word in reverser order . 2

Example:

If value in text file is: *INDIA IS MY COUNTRY*

Output will be: *AIDNI SI MY COUNTRY*

- c) Given the binary file ITEM.DAT, containing the records of the following structure: 3
class item

```

{
    int item_no;
    char item_name[20];
    int stock;
    public:
    int itmreturn()
    {
        return item_no;
    }
};

```

Implement the function DelStock(), which delete a record of matching item_noentered through the keyboard.

- 4) a) Observe the program segment given below carefully and fill the blanks marked as Statement 1 and Statement 2 using seekp() and seekg() functions for performing the required task. 1

```

#include <fstream.h>
class Item
{
    int Ino;
    char Item[20];
    public:
    //Function to search and display the content from a particular //record number

```

```

void Search(int );
//Function to modify the content of a particular record number
void Modify(int);
};
void Item::Search(int RecNo)
{
    fstream File;
    File.open("STOCK.DAT",ios::binary|ios::in);
    _____ //Statement 1
    File.read((char*)this,sizeof(Item));
    cout<<Ino<<"=="<<"<<Item<<endl;
    File.close();
}
void Item::Modify(int RecNo)
{
    fstream File;
    File.open("STOCK.DAT",ios::binary|ios::in|ios::out);
    cout>>Ino;cin.getline(Item,20);
    _____ //Statement 2
    File.write((char*)this,sizeof(Item));
    File.close();
}

```

- b) Write a function in C++ to count the number of lines present in a text file "STORY.TXT". 2
- c) Write a function in C++ to search for a BookNo from a binary file "BOOK.DAT", assuming the binary file is containing the objects of the following class. 3M

```

class
{
    int Bno;
    char Title[20];
public:
    int RBno(){return Bno;}
    void Enter(){cin>>Bno;gets(Title);}
    void Display(){cout<<Bno<<Title<<endl;}
};

```

- d) Differentiate between text file and binary file in C++

2M