Assignment-4 Class 12 2010-2011 Subject :Computer Science

Q1. What is the difference between global variables and local variables? 2

Q2. Write the names of the header files to which the following belong --- 1

i) strcmp( ) ii) fabs( )

Q3.Find the output of the following program ------ 3

```
# include<iostream.h>
Struct  PLAY
 {  int  Score, Bonus;
 } ;
 void Calculate(PLAY   &P,int N=10)
  { P.Score++;
    P.Bonus+=N ;
  }
void main ( )
   {   PLAY  PL = { 10,15} ;
      Calculate(PL,5) ;
      cout<<PL.Score<<" : "<<PL.Bonus<<endl ;
      Calculate(PL);
      cout<<PL.Score<<" : "<<PL.Bonus<<endl ;
      Calculate(PL,15);
      cout<<PL.Score<<" : "<<PL.Bonus<<endl;
   }
```

Q4.Find the output of the following program ---- 2

```
#include<iostream.h>
 #include<ctype.h>
   void Encrypt(char  T[])
        {   for (int i = 0;T[i]!='\0';i+=2)
                  if (T[i]=='A'||T[i]=='E')
                        T[i]='#';
              else if(islower (T[i]))
                        T[i]=toupper(T[i]);
              else
                       T[i]='@';
    }
    void main()
         {
              char text[]="SaVE EArtH";          //the two words in the starting text
              Encrypt(text);                     //are separated by single space
              cout<<text<<endl;
         }
```

Q5. What do you understand by Data Encapsulation and data Hiding? 2

Q6. What is the difference between Object Oriented Programming and Procedural Programming? 2

Q7. Write the names of the header files to which the following belong- 1

i) frexp( ) ii) isalnum ( )

Q8. What do you understand by polymorphism?Give a suitable example. 2

Q9.Write a function in C++ to combine the contents of two equi-sized arrays A and B by computing their corresponding element with the formulae 2*A [i] + 3*[i] ; where value i varies from 0 to N-1 and transfer the resultant content in the third same sized array. 4

Q10. Define a class Garments in C++ with the following descriptions: **4**

Private Members:

GCode	**of type string**
GType	**of type string**
GSize	**of type Integer**
GFabric	**of type string**
GPrice	**of type float**

A function Assign( ) which calculates and assigns the value of GPrice as follows:
For the value of GFabric as "COTTON":

GType	GPrice (Rs)
TROUSER	1300
SHIRT	1100

For GFabric other than "COTTON" the above mentioned GPrice gets reduced by 10%.

Public Members

- **A constructor to assign initial values of GCode, GType, and GFabric with the word "NOT ALLOTTED" and GSize and GPrice with 0.**
- **A function Input( ) to input the values of the data members GCode, GType,GSize and GFabric and invoke the Assign ( ) function.**
- **A function Display ( ) which displays the content of all the data members for a Garment.**

Q.11 Define a class clothing in C++ with the following descriptions- **4**

Private Members:

Code	**of type string**
Type	**of type string**
Size	**of type integer**
Material	**of type string**
Price	**of type float**

A function Calc_Price ( ) which calculates and assigns the value of Price as follows-
For the value of Material as "COTTON":

Type	Price (Rs.)
TROUSER	1500
SHIRT	1200

For Material other than "COTTON" the above mentioned Price gets reduced by 25%.

Public Members

- **A constructor to assign initial values of Code, Type, and Material with the word "NOT ASSIGNED" and size and price with 0.**
- **A function Enter ( ) to input the values of data members Code,Type,Size and Material and invoke the Calc_Price ( ) function.**
- **A function Show( ) which displays the content of all the data members for a clothing.**