

ASSIGNMENT SA1 2014-15
CLASS XII – COMPUTER SCIENCE

Define a class **TAXPAYER** in C++ with following description :

Marks

Private members :

- a. Name of type string
- b. PanNo of type string
- c. Taxabincm (Taxable income) of type float
- d. TotTax of type double
- e. A function CompTax() to calculate tax according to the following slab:

| Taxable Income | Tax % |
|----------------------|-------|
| Up to 160000 | 0 |
| >160000 and <=300000 | 5 |
| >300000 and <=500000 | 10 |
| >500000 | 15 |

Public members :

- o A parameterized constructor to initialize all the members
- o A function INTAX() to enter data for the tax payer and call function CompTax() to assign TotTax.
- o A function OUTAX() to allow user to view the content of all the data members.

2. Give the *output* of the following program (Assuming that all required header files are included in the program) :

```
#include<iostream.h>
#include<stdio.h>
#include<conio.h>
void TRANSFER(char *s1,char *s2)
{ int n,j=0;
for(int i=0;*(s1+i)!='\0';i++)
{
n=*(s1+i);
if(n%2==0)
*(s2+j++)=*(s1+i);
} }
void main()
{ char *p="ChaRlesBabBaGe",q[80];
TRANSFER(p,q);
cout<<q<<endl;}
```

3. Answer the questions (i) to (iv) based on the following: 4

```
class FacetoFace {
char CenterCode[10];
public:
void Input();
void Output(); };
class Online {
char Website[50];
public:
void Sitein();
void Siteout();};
class Training : public FacetoFace, private Online {
```

- (i) Which type of inheritance is shown in the above example?
(ii) Write names of all member functions accessible from Show() function of class Training.
(iii) Write names of all the members accessible through an object of class Training.
(iv) Is the function Output() accessible inside the function SiteOut()? Justify your answer.

4. Write a function *TRANSFERP(int ALL[], int N)*, to transfer all the prime numbers from a one dimensional array ALL[] to another one dimensional array PRIME[]. The resultant array PRIME[] must be displayed on screen.

5. An array PP[40][32] is stored in the memory along the row with each of the elements occupying 10 bytes. Find out the memory location for the element PP[18][22], if the element PP[7][10] is stored at memory location 5000.

6. Convert the following infix expression to its equivalent postfix expression Showing stack contents for the conversion:

$(A+B)*(C^{(D-E)}+F)-G$

7. Assume a text file "coordinate.txt" is already created. Using this file create a C++ function to count the number of words having first character capital. Also count the presence of a word 'Do'.

8. Write function in C++ to perform Insert operation in a dynamically allocated Queue containing names of employees

9. Write a function in C++ to display object from the binary file "PRODUCT.Dat" whose product price is more than Rs 200. Assuming that binary file is containing the objects of the following class:

```
class PRODUCT {  
int PRODUCT_no;  
char PRODUCT_name[20];  
float PRODUCT_price;  
public:  
void enter( ) {  
cin >> PRODUCT_no ; gets(PRODUCT_name) ;  
cin >> PRODUCT_price; }  
void display() {  
cout << PRODUCT_no ; cout << PRODUCT_name ; cout << PRODUCT_price; }  
int ret_Price( ) {  
return PRODUCT_price;  
} };
```

10. Write a function **Get1from2()** function in C++ to transfer the content from two arrays First[] and Second[] to array All[]. The even places (0,2,4,...) of array All[] should get the contents from the array First[] and odd places (1,3,5,...) of the array All[] should get the contents from the array Second[]

Eg:

If the First [] array contains 30, 60,90,

And the Second [] array contains 10, 50,80,

Then All [] array should contain 30, 10, 60,50,90,80.