



COMPUTER SCIENCE

(330)

Time : 3 Hours]

[Maximum Marks : 60

- Note :**
- (i) Answer all questions.
 - (ii) Marks allotted to each questions are given in the right-hand margin.
 - (iii) Use C++ programming language to answer the programming questions.

1. Define the following terms briefly : 1x5=5
- (a) Scanners
 - (b) RAM
 - (c) Half-Duplex
 - (d) WAN
 - (e) My Computer
2. (a) Differentiate between the following : 2x3=6
- (i) Fixed length record and variable length record.
 - (ii) System Software and Application Software.
 - (iii) Star Network Topology and Ring Network Topology
- (b) (i) What is Internet ? How do you connect to Internet ? 2
- (ii) Discuss any two characteristics of Java. 2
3. (a) Explain the Concept of Data Abstraction, Modularity, Inheritance and Polymorphism. 4
- (b) (i) Rewrite the following Statement to use the value of C as 8 : 1
- float C = 8.5;
- (ii) If Sum = 12; Ctr = 4; then write a C++ Statement to get the value of sum equal to 15 ? 1
- (iii) Declare variable x of type int and y of type float. Write a C++ program to input the values of x and y and display the same on screen. 3

- (c) Find out syntax error(s), if any in the following program and rewrite the corresponding correct code underlining each correction made : 3

```
#include<iostream.h>
void main()
{
    int x,y;
    cin>>x;
    if(y=0;y<10,y++)
        if x==y
            cout<<y+x;
        else
            cout>>y;
}
```

4. (a) What is a structure ? Write a structure specification that includes three variables all of type int called hrs, mins and secs. 3

Call this structure time. Display output for hrs = 14, mins = 56 and secs = 32.

- (b) Give output for following program : 3x2=6

(i) #include<iostream.h>
#include<conio.h>
void main()
{
int i=3;
do
{
if(i%2==0)
i++;
else cout<<i++<<'\$';
i+=2;
}
While(i<=10);
cout<<--i<<'*';
}



```

(ii) include<iostream.h>
void average(float);
void main()
{
    float ans;
    float x=5.0;
    float y=6.2;
    float z=5.9;
    ans=average(x,y,z)
    cout<<"Answer="<<ans;
}
void average(float x,float y,float z)
return((x+y+z)/3);
}

```

5. (a) (i) Define a two dimensional array A having 2 rows, 3 columns and stores int data type ? 1
- (ii) Write a program in C++ that will input 10 numbers from the user in one - dimensional array and arrange the numbers in ascending order ? 5
- (b) A file 'Student.txt' contains data corresponding to following structure : 5

```

Struct Student {
int roll no;
Char name[30];
int marks;
};

```

Write a program in C++ to write and display the records from the file.

6. Answer the following questions briefly :
- (a) Explain the concept of Inline Function and Function Overloading ? Give an example of Function Overloading ? 4
- (b) Explain the concept of Derived class and multiple inheritance ? Give an example of Derived Class ? 3

- (c) Define a class LEARNER with the following specifications :

3

Private members of the Class

Name - A String of 30 Characters

Rollno - Number without decimal

Marks - Number with decimal

Public members of the Class

Get data()-to input the data

Put data()-to write the data

In main program, call above functions.

- (d) Define pointer using an example. Also, rewrite the following program using pointer notation :

3

```
#include<iostream.h>
void main()
{
    intA[5]={5,10,15,20,25};
    for(inti=0;i<5;i++)
        cout<<"\n"<<A[i];
}
```

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