SCHEME – E

SAMPLE QUESTION PAPER

Course Name : Computer Engineering Group

Course Code : CO\CT\IF\CD

Semester : Third **12063**

Subject Title : Object oriented programming

Marks : 100 **Time: 3 Hours**

Instructions: 1.All questions are compulsory.
2. Figures to the right indicates full marks.
3. Use of non-programmable calculator is permissible.

Q.1: Attempt any TEN of the following: **(2 x 10 = 20)**

a) Define the term encapsulation.

b) Give the structure declaration for structure student having following members.
1) Student name. 2) Roll number. 3) Percentage.

c) Describe the term class.

d) At what stage of program execution memory is allocated to an object?

e) Describe the term Destructor.

f) Define function overloading? With example.

g) Can we change meaning of operator using the concept of operator overloading? Justify with example.

h) State syntax of the operators used for pointer declaration.

i) List the types of polymorphism.

j) List two access specifier.

k) What is default constructor?

l) Describe abstract class? With example.

Q.2: Attempt any FOUR of the following: **(4 x 4 = 16)**

a) What are the different types of inheritance? Describe any one with suitable example.

b) When do we make a class virtual?

c) Differentiate between static binding and dynamic binding.

d) Write a program to calculate area of circle and rectangle using the concept of function overloading.

e) What is runtime polymorphism? Explain with example

f) Write a program to search an element in an Array using a pointer

Q.3: Attempt any FOUR of the following: (4 x 4 = 16)

a) Find out the errors, if any, in the following program

```
#include<iostream.f>
class emp
{
 private:
        char name[10];
        char city[10];
 public:
        emp(char *a, char *b)
        {
           strcpy(name,a);
           strcpy(city,b);
        }
}
void main()
{
   emp my("Raj","pune");
}
```

b) Write a program to swap two integer values by using call by value.

c) What is dynamic memory allocation? Explain with suitable example.

d) Write a program to illustrate the concept of copy constructor.

e) Illustrate the term multiple constructor.

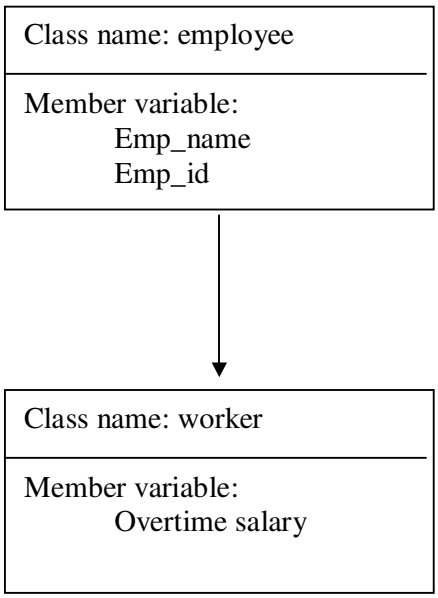
f) Write a program to overload" +" operator so that it will perform concatenation of two strings.

Q 4: Attempt any FOUR of the following: (4 x 4 = 16)

a) Write a program to declare a class mobile having data members as 1) price. 2) Model number. Accept and display this data for one object.

b) Define a class containing operator function to overload unary minus ('-') operator. Assume suitable data.

c) Write a program to implement inheritance as shown in fig. given below. Assume suitable member functions.



d) In procedure oriented programming all data are shared by all functions. Is this statement TRUE? Justify your answer.

e) Why cin and cout are not considered as keywords?

f) List four stream classes and give stream classes for console operation.

Q.5 Attempt any TWO of the following: (8 x 2 = 16)

a) Write a program to find length of the string using pointer to string. Concept.

b) Write a program to accept two filenames from user i.e. source and destination filenames. Copy contents of source file to destination file.

c) Write a program to declare a class 'employee', consisting of data members emp_no, and emp_name. Write the member functions accept() to accept and display() to display the data for 5 employees.

Q.6 Attempt any FOUR of the following: (4 x 4 = 16)

a) What is the output of the following program

```
#include<iostream.h>
class employee
{
   int empcode;
```

```
    char name[20];
    float salary;
  public:
    void accept()
    {
        cout<<"Enter Employee code, name, salary";
        cin>>empcode>>name>>salary;
    }
};
int main()
{
    employee e[5];
    cout<<sizeof(e)<<endl;
    cout<<sizeof(employee);
    return (0);
}
```

b) Give syntax of following with respect to file
   i) read()
   ii) write()

c) Compare the following
   i) get() and getline()
   ii) get() and read()

d) write a program to display following formatted output using manipulator

1_ _ _ _ 1

2_ _ _ _ 2

3_ _ _ _ 9

e) What is function overriding explain with example.

f) Give syntax & use of new operator.