University: Rajasthan Technical University
Course: B.Tech Computer science & engineering
Subject: Object Oriented Programming
Exam Year: February 2010
Year or Semester: Second year/ Third Semester
Paper Code: 3E2074

Unit-I

1. Explain structure as a user defined data type in C with the help of suitable example. [Marks 16]

<div align="center">OR</div>

1. a) Explain following with their syntax :
i) pointer to structure
ii) parsing structure to function
iii) array of structure. [Marks 4+4+4]
b) What is the difference between structured programming and object oriented programming? [Marks 4]

Unit-II

2. a) What is constructor? How many types of constructors are in C++? Describe with the help of a suitable example. [Marks 10]

2. a) What is friend function? Write a program to swap private data of two classes. [Marks 8]

b) Differentiate followings:

i) Objects and classes

ii) Data abstraction and encapsulation

iii) Inline function and macro

iv) Constructor and destructor [Marks 2*4=8]

Unit-III

3. What is operator overloading? How many arguments are required to overload unary and binary operators, respectively? Define a class string, use overloaded == operator to compare two strings. [Marks 2+2+12=16]

OR

3. a) What is type conversion in C++? How it is achieved in user defined data types? [Marks 8]

b) What is function overloading? Explain with the help of a suitable example. [Marks 8]

Unit-IV

4. What is inheritance? What are the various forms of inheritance? Explain each with the

help of examples. [Marks 16]

OR

4. What is polymorphism? How is it achieved at compile time and runtime? Explain both with the help of example. [Marks 16]

Unit-V

5. What is generic programming? How is it implemented in C++? Write a program to implement sorting using templates. [Marks 16]

OR

5. Write short notes on : (any two)
a) Exception handling
b) Virtual Base Class
c) Multiple inheritance. [Marks 2*8=16]