

2012

B.A./B.Sc. (General) Third Semester

Information Technology

Paper – A: Computer Programming Using C++

Time allowed: 3 Hours

Max. Marks: 65

NOTE: Attempt five questions in all, including Question No. IX (Unit-V) which is compulsory and selecting one question each from Unit I - IV.

x-x-x

UNIT – I

- I. a) Differentiate between the concept of Pass by value and Pass by reference for passing the objects as function argument. Give suitable example for the same.

b) What is the role of friend function? Explain the concept using valid C++ code for using friend function. (7.6)
- II. a) Differentiate between OOP and Procedure Oriented Programming language.
b) What do you understand by Inline function? What is its significance? (7.6)

UNIT - II

- III. a) Discuss briefly different types of constructors in C++ language. Give syntax of each.
b) What are the different visibility modes in C++ language? Discuss the significance of each visibility mode. (7.6)
- IV. What is inheritance? Why is it an important feature of OOPs? What are the different types of inheritance in C++? Discuss in detail. (13)

UNIT - III

- V. a) What is early binding and late binding?
b) Write a program in C++ to count the number of Character, Words and Sentences in a file using file handling concept. (6.7)
- VI. a) Discuss the concept of virtual function in C++. Discuss its role giving suitable example.
b) Write a program in C++ to convert the file contents in upper case and then write the contents in a new file. (7.6)

P.T.O.

UNIT - IV

- VII. a) What is an array? What are its types? Discuss the memory representation of array.
b) Write a program in C++ to implement stack using arrays. (6.7)
- VIII. What is a queue? Discuss the memory representation of queue. Write a program in C++ to implement queue along with its operations to add and delete element in a queue. Also find largest element in a queue. (13)

UNIT - V

- IX. Answer the following questions briefly:-
- a) Define circular list. (2)
 - b) Define the concept of polymorphism (2)
 - c) What is a pure virtual function? Give example. (3)
 - d) Give an example to access the elements of a nested class. (3)
 - e) Write a program to show the concept of arrays within a class. (3)