

**BACHELOR IN COMPUTER
APPLICATIONS****Term-End Examination****June, 2007****CS-72 : C++ AND OBJECT ORIENTED
PROGRAMMING**

Time : 2 hours

Maximum Marks : 60

Note : Question number 1 is **compulsory**. Attempt any **three** questions from the rest.

1. (a) Mention the difference between C and C++. Why is it necessary to include header files in a program written in these languages ? 8
- (b) Discuss the basic data types of C++. Suggest appropriate data type for the following : 5
- (i) Someone's height in meters
- (ii) An exclamation mark
- (iii) The number of students in a university
- (c) What is the purpose of information hiding ? 5

- (d) Write a program which will accept a string of maximum 10 characters from the keyboard, and count the occurrences of each of the 5 vowels in the string. The output should be in tabbed format as shown below : 12

```
A E I O U
0 1 0 0 1
```

2. (a) Differentiate between operator and function overloading with the help of suitable example. 5
- (b) Explain the concept of a destructor in a class. What is its role in terms of cleanup of unwanted objects ? 5
3. (a) How is the exception handling performed in C++ ? Write a program that throws an arithmetic exception as and when a number input is greater than 9999. 6
- (b) Write a C++ template function, called **exchange()** that accepts two arguments of generic type and swaps their contents. 4
4. (a) Write a C++ program to print reverse of a 5-digit number. 5
- (b) Explain the concept of metadata. 5

5. Define the following :

10

- (i) Polymorphism
- (ii) Typecasting
- (iii) Class and instance
- (iv) Containership
- (v) Abstract class

