

**BACHELOR IN COMPUTER
APPLICATIONS**

Term-End Examination

June, 2012

**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. All example must be in C++ programming language only.

1. (a) What is Object Oriented Programming ? 5
Explain any three advantages of OOP over Procedure Oriented Programming.
- (b) Create a class Employee . Include Emp-no, 10
Emp-name, Basic-Salary , DA ,HRA,
Conveyance and Medical as data members.
Include member functions to accomplish the following :
- (i) Accept Emp-no, Emp-name and Basic-Salary from the user.
- (ii) Calculate DA as 50%of Basic Salary and HRA as 30% of Basic-Salary.
- (iii) Initialise conveyance and Medical to Rs. 2000/ and Rs. 1000/ respectively, whenever on object is created.

- (iv) Count the number of objects created.
- (v) Display the data of all employees entered and the gross salary computed as sum of the Basic -Salary, DA, HRA ,Conveyance and Medical.

Write the appropriate main function for the above.

- (c) What are friend functions ? Explain Two merits and Two demerits of using friend functions. 6
 - (d) Explain the following with relevant examples : 9
 - (i) inline functions
 - (ii) call by reference
 - (iii) break, continue and exit.
2. (a) What is Exception Handling and how is it implemented in C++ ? Elaborate it with the help of an example. 7
- (b) Explain the scope and inheritance of public, private and protected members of a class. 3
3. (a) What is a default copy constructor and why is it needed ? Explain with the help of an example. 4
- (b) What do you mean by templates ? Explain the creation and usage of function templates for executing linear search on an array. 6

4. Differentiate between the following with the help of examples. 10
- (a) Operator overloading versus function overloading.
 - (b) Static binding Vs. Dynamic binding.
5. (a) What are Virtual functions ? Where are they needed ? Are virtual functions inherited ? Justify your answer with the help of an example. 6
- (b) Explain the various data types used in C++. What are the rules for naming variables in C++. 4
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