BACHELOR OF COMPUTER APPLICATIONS (Pre-revised)
(BCA)
Term-End Practical Examination
December, 2016

CS-72(P)/S1 : C++ AND OBJECT ORIENTED PROGRAMMING

Time : 2 Hours   *Maximum Marks : 100*
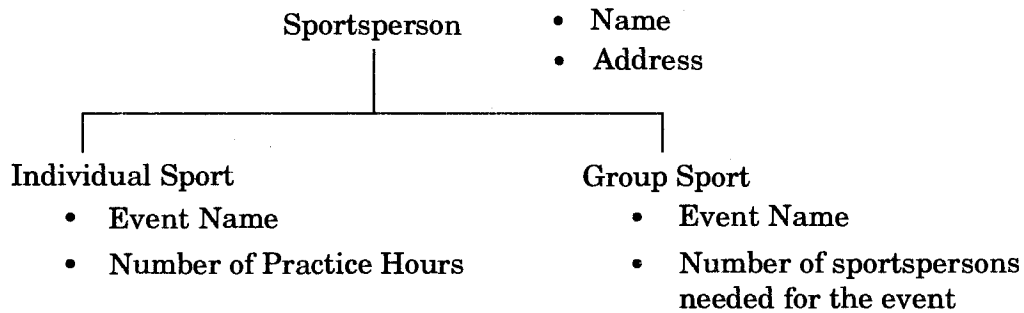
(Weightage : 15%)

Note :   (i)   *There are two **compulsory** questions in this paper carrying 40 marks each. Rest 20 marks are for viva-voce.*

   (ii)   *You must write appropriate main( ) function and test your programs.*

   (iii)   *Write/print your programs, input and results on your answer-sheet.*

   (iv)   *Make and state suitable assumptions, if any.*

1.   Design and implement a class "Athlete" using C++ having the following features :

   •   The class should store the name, event, country and age of an athlete.

   •   The class should have the following member functions :

   (a)   A member function to input values to data members of an object.

   (b)   A member function that displays data stored in data members of an object.

   (c)   A member function that changes the age of an object.

   Write appropriate main( ) function that creates an array of three "Athlete" objects and demonstrates all the member functions. You must store meaningful values in the objects.   *40*

2. Consider the following class hierarchy along with suggested data members :

Sportsperson
- Name
- Address

Individual Sport
- Event Name
- Number of Practice Hours

Group Sport
- Event Name
- Number of sportspersons needed for the event

Design and implement the classes in the hierarchy using C++. You may add more data members in the classes. You should include at least one constructor in each class. All the classes should have a member function print_info( ) which should display all the data of that object. You must demonstrate polymorphism using the print_info( ) and main( ) functions. *40*