CS-72

BACHELOR OF COMPUTER APPLICATIONS (BCA) (Pre-Revised)

Term-End Examination

June, 2018

00385

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 program codes must be in C++ programming language only.*

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1. (a) Differentiate between Macros and Functions. *4*

   (b) Explain Function Overloading with the help of an example. *4*

   (c) How do we make virtual functions "public" ? Explain with the help of an example. What are the implications of making a function, a pure virtual function ? *6*

   (d) Explain constructor and destructor with the help of examples. *5*

   (e) List the features of Object Oriented Programming. *5*

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(f) Find the errors, if any, in the following code : 6

(i)
```
#include <iostream.h>
class xyz
{ private:
    int d1;
    float d2;
  public:
      void xyz();
      void display();
};
void main()
{
   xyz S;
   S.showdata();
}
```

(ii)
```
#include <iostream.h>
#define PI=3·14
void main()
{ float r;a;
   cout << 'enter any radius';
   cin >> r;
   a = PI * pow(r, 2);
   cout <<"Area="<<a
}
```

2. (a) Write a C++ program to count the number of words in a given file. (*Note :* words could be separated by only single space)   *5*

    (b) What is Inheritance ? What are base and derived classes ? Give a suitable example of inheritance.   *5*

3. (a) What is a Template ? List the merits and demerits of using a template in C++.   *5*

    (b) What is Dynamism ? Explain Dynamic Typing and Dynamic Binding with suitable examples.   *5*

4. Explain the following :   *10*

    (a) Data Abstraction

    (b) 'This' Pointer

    (c) Inline Function

    (d) Objects

5. (a) Explain Multilevel and Multiple inheritance with suitable examples.   *5*

    (b) Write a program to swap two integers.   *5*