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Sixth Semester B.E. Degree Examination, June/July 2017
Object Oriented Programming using C++

Time: 3 hrs.

Max. Marks:100

*Note: Answer any FIVE full questions, selecting
atleast TWO questions from each part.*

PART – A

- 1 a. What is object oriented programming? How it's different from the procedure oriented programming. (07 Marks)
- b. How are data and functions organized in object-oriented program? (06 Marks)
- c. Explain the benefits of oops and applications of oops. (07 Marks)
- 2 a. Enumerate the rules of naming variables in C++. How do they differ from C rules? (06 Marks)
- b. Explain the need of new and delete operators in C++. (06 Marks)
- c. Write a C++ program to evaluate the following series :
Sum = $1 + (\frac{1}{2})^2 + (\frac{1}{3})^3 + (\frac{1}{4})^4 + (\frac{1}{5})^5 + \dots$. (08 Marks)
- 3 a. Explain the call by value and call by reference with programming example. (06 Marks)
- b. What do you meant by overloading of a function? Explain with programming example. (06 Marks)
- c. Write a C++ program to perform addition, subtraction, multiplication, division and reminder of two numbers using inline function. (Each operation should be written with one separate function in the program). (08 Marks)
- 4 a. What are classes? Explain class declaration and class function definitions in C++. (08 Marks)
- b. Explain the public, private and protected access-specifies. (06 Marks)
- c. Explain friend functions in C++. (06 Marks)

PART – B

- 5 a. What are constructors? Mention its properties. Explain the different types of constructors with suitable examples. (10 Marks)
- b. Can we have more than one constructor in a class? If yes, explain the need for such a situation. (05 Marks)
- c. What is destructor? Explain with example. (05 Marks)
- 6 a. What is operator overloading? Mention the operators that cannot be overloaded. (06 Marks)
- b. List the rules of operator overloading. (04 Marks)
- c. Write a C++ program to accept two complex numbers, add them and display the output using overloading operator '+'. (10 Marks)
- 7 a. What are the different forms of inheritance supported by C++? Explain them with suitable examples. (10 Marks)
- b. What is the constructor rule for inheritance? Explain. (05 Marks)
- c. Explain virtual base classes in C++. (05 Marks)
- 8 Write explanatory notes on :
 - a. Virtual functions
 - b. Arrays in C++
 - c. Overloading binary operators
 - d. Type conversion in C++. (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.