KUMARAGURU
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Register Number:……

MCA DEGREE EXAMINATIONS: NOV/DEC 2014

(Regulation 2009)

Second Semester

MASTER OF COMPUTER APPLICATIONS

MCA 506: Object Oriented Programming And C++

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

1. What are the main characteristics of OOP language?
2. Mention the unique advantages of OOP paradigms.
3. How are a class and instance of a class created?
4. What are inline functions? Give an example.
5. Is it necessary to use a constructor in a class? Justify.
6. Differentiate default constructor and copy constructor
7. Give the types of exceptions supported by C++.
8. How are virtual functions declared in C++?
9. Name the functions supported by file stream classes for performing I/O operations.
10. Define STL and give its important components.

PART B (5 x 16 = 80 Marks)

11. a) (i) What are the needs of OOP paradigms? (8)

    (ii) Enlighten the implementation of C++ basic principles with suitable examples. (8)

(OR)

    b) State and explain the applications of OOP technology.

12. a) (i) Describe the situations where the inline concept may not work? Give suitable example. (8)

    (ii) How memory allocation and reallocation is handled in C++? Explain. (8)

(OR)

b) Elucidate the various types of constructor with a programming example.

13. a) Write a program in C++ to perform string initialization, string copy and string destruction using overloaded constructor.

(OR)

b) Write a C++ program to implement Z=X+Y, Z=X-Y and Z= X*Y where Z, X and Y are objects containing an integer value.

14. a) Elucidate the various types of inheritance with a programming style for each type.

(OR)

b) Explain about the virtual and pure virtual functions with suitable programming examples.

15. a) (i) Describe the design philosophy of the STL? (6)

(ii) What are the things a programmer should be aware while using the STL? Discuss in detail. (10)

(OR)

b) Write briefly about I/O stream classes in C++ with a programming example.

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