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**Question Paper Code: 50234**

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

Third Semester

Computer Science and Engineering

15UCS304 - OBJECT ORIENTED PROGRAMMING WITH C++

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

- \_\_\_\_\_ operator is used when we define the function outside of the class.  
(a) ::                      (b) :                      (c) =                      (d) /
- A \_\_\_\_\_ constructor takes no arguments (Def).  
(a) Default                      (b) Copy                      (c) Parameterized                      (d) Public
- C++ supports a mechanism known as \_\_\_\_\_ to achieve run time polymorphism.  
(a) Private Function                      (b) User Defined Function  
(c) Virtual Function                      (d) Friend Function
- \_\_\_\_\_ keyword is used to handle the exception.  
(a) try                      (b) catch                      (c) throw                      (d) throws
- \_\_\_\_\_ member function is used to determine whether the stream object is currently associated with a file.  
(a) is\_close                      (b) is\_open                      (c) is\_read                      (d) is\_write

PART - B (5 x 3 = 15 Marks)

- How the class is specified in C++?
- How an overloaded operator can be invoked using Friend functions?

8. State virtual base class.
9. Write the steps to be performed when an exception is raised.
10. Write the syntax for defining a namespace.

PART - C (5 x 16 = 80 Marks)

11. (a) What is encapsulation? What are its advantages? How can encapsulation be enforced in C++? (16)

Or

- (b) Discuss about the key concept of Object Oriented Programming in detail. (16)

12. (a) Why is destructor function required in class? What are the special characteristics of destructors? Can a destructor accept arguments? (16)

Or

- (b) Create a class vector that represents an integer array. Using friend function overload \* operator to perform 3\*m, where m is an object of the class vector. Test the class with suitable main function. Can we use member function to overload the \* operator instead of friend function? Justify your answer. (16)

13. (a) Illustrate the concept of inheritance with an example. (16)

Or

- (b) Explain virtual functions and pure virtual functions with examples. (16)

14. (a) Write a C++ program to sort an array of integer, character and float elements using function template. (16)

Or

- (b) What is exception specification? Explain when it is required with suitable example. (16)

15. (a) Explain about random access file in detail. (16)

Or

- (b) Discuss the syntax for creating user defined manipulators. (16)