Reg. No. :

Question Paper Code: 53024

B.E. / B.Tech. DEGREE EXAMINATION, NOV 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)

1. Which of the following concepts means determining at runtime what method to invoke.

    (a) Data hiding   (b) Dynamic Typing
    (c) Dynamic binding   (d) Dynamic loading

2. Which of the following is not a type of constructor?

    (a) Copy constructor   (b) Friend constructor
    (c) Default constructor   (d) Parameterized constructor

3. How many types of polymorphisms are supported by C++?

    (a) 1   (b) 2   (c) 3   (d) 4

4. Which of the following problem causes an exception?

    (a) Missing semicolon in statement in *main( )*
    (b) A problem in calling function
    (c) A syntax error
    (d) A run-time error

5. _____ 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)

6. Write the differences between passing a parameter by reference and constant reference.

7. How an overloaded operator can be invoked using Friend functions?

8. Discuss the syntax and rules of multiple inheritances in C++.

9. What will happen when a programs throws any other type of exception other than specified?

10. Write the syntax of a function template in C++.

PART - C (5 x 16 = 80 Marks)

11. (a) (i) Explain the different characteristics of object oriented languages. (8)

    (ii) Write a program in C++ which calculates the factorial of a given number. (8)

Or

(b) (i) What is the role of an inline function? How does it differ from macro? Explain with examples. (6)

    (ii) Write a program to overload the unary minus operator using friend function.(10)

12. (a) Write a program to implement a class that finds the volume of different shapes cube, cylinder, and cone using function overloading. (16)

Or

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

13. (a) Write a program to declare three classes S1, S2 and S3. The classes have a private data number variable of character data type. Read strings for the classes S1 and S2. Concatenate these strings and assign it to the data member variable of class S3. (16)

Or

(b) What is multilevel inheritance? How it differs from multiple-inheritance. (16)

14. (a) (i) What is standard template library? Write the types of STL? Write an example program for each STL types. (8)

    (ii) Define a class template Queue with put( ) and get( ) operations. Using this create a Queue of integers in main( ) and add two elements to the queue. (8)

2

53024

Or

(b) What are the various ways of handling exceptions? Which one is the best? Explain.
(16)

15. (a) What are the two methods of opening a file? Explain with examples. What is the difference between the two methods. (16)

Or

(b) (i) Explain about Formatted and Unformatted IO with suitable examples. (8)

(ii) What you meant by file? Write the types of File access? Write an example program for sequential access. (8)

————————————

53024