Reg. No. : | | | | | | | | | | |

Question Paper Code: 31834

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

Third Semester

Information Technology

01UIT304 - OBJECT ORIENTED PROGRAMMING

(Common to Computer Science and Engineering)

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. What do you mean by Data Abstraction?
2. List the features of inline function.
3. How does a constructor differ from normal functions?
4. Mention the rules for defining constructors.
5. What are the various ways of handling exceptions?
6. Give simple example program for exception handling.
7. What is a pure virtual function?
8. Define abstract class.
9. What are the manipulators available in C++?
10. Define object serialization.

PART - B (5 x 16 = 80 Marks)

11. (a) Illustrate the basic concepts of object oriented programming. (16)

Or

(b) (i) Define Scope and explain the different storage classes available in C++. (8)

(ii) What are friend functions? Explain their characteristics with a suitable example. (8)

12. (a) (i) Define constructor and destructor with a sample program. (8)

(ii) Explain about copy constructor with suitable example. (8)

Or

(b) Write a C++ program to overload << and >> operators to read and write user defined objects of Student Class. Use friend functions for overloading. (16)

13. (a) Mention the components of exception handling. What is the role of each component? Illustrate. (16)

Or

(b) Create an abstract base class shape with two members base and height, a member function for initialization and a pure virtual function to compute area ( ). Derive two specific classes Triangle and Rectangle which override the function area ( ). Use these classes in a main function and display the area of a triangle and a rectangle. (16)

14. (a) What is multiple inheritance? Discuss the syntax and rules of multiple inheritance in C++.How can you pass parameters to the constructors of base classes in multiple inheritance? Explain with suitable example. (8)

Or

(b) Write a C++ program to demonstrate the problem available in Multiple Inheritance. Also illustrate how it can be resolved. (16)

15. (a) (i) Write a program which copies the contents of one file to a new file by removing unnecessary space between words (8)

(ii) Explain the use of any five manipulators with an example. (8)

Or

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

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