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**Question Paper Code: 41834**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

Third Semester

Information Technology

14UIT304- OBJECT ORIENTED PROGRAMMING

(Common to Computer Science and Engineering)

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. What are the things to be inherited from the base class?
  - (a) constructor and destructor
  - (b) friends
  - (c) operator = () members
  - (d) all the above
2. Which of the following are available only in the class hierarchy chain?
  - (a) Public data members
  - (b) Private data members
  - (c) Protected data members
  - (d) Member functions
3. Which of the following operators cannot be overloaded?
  - (a) +
  - (b) <
  - (c) ::
  - (d) =
4. Which of the following cannot be friend?
  - (a) Function
  - (b) Class
  - (c) Object
  - (d) Operator function
5. Which statement is used to catch all types of exceptions?
  - (a) catch()
  - (b) catch(Test t)
  - (c) catch(...)
  - (d) catch(Exception e)

6. 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
7. Virtual functions are used in
- (a) early binding
  - (b) static binding
  - (c) dynamic binding
  - (d) none of these
8. How many instances of an abstract class can be created?
- (a) 1
  - (b) 5
  - (c) 13
  - (d) 0
9. Which header file is used for reading and writing to a file?
- (a) `#include<iostream>`
  - (b) `#include<fstream>`
  - (c) `#include<file>`
  - (d) `#include<conio>`
10. What is meant by standard C++ library?
- (a) It is the collection of class definitions for standard data structures and a collection of algorithms
  - (b) It is a header file
  - (c) Both (a) and (b)
  - (d) None of these

PART - B (5 x 2 = 10 Marks)

11. What is inline function? Give an example.
12. Define the terms `realloc()` and `free()`.
13. What is the use of `terminate` and `unexpected` functions? When they are called?
14. What is an abstract class?
15. What is the role of the file opening mode `ios::trunc`?

PART - C (5 x 16 = 80 Marks)

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

Or

(b) (i) Write short notes on Static Member function with an example. (8)

(ii) Write a C++ program that inputs two numbers and outputs the largest number using inline function. (8)

17. (a) (i) Explain '+' operator overloading with an example. (8)

(ii) Explain type conversion with suitable example. (8)

Or

(b) What are the characteristics of constructor functions? Explain the various types of constructors and destructors. Illustrate with example program. (16)

18. (a) (i) To write a C++ program to implement swapping of two numbers using function template of type integer, float, and character. (8)

(ii) Write short notes on class template with example. (8)

Or

(b) What is an exception? How it is handled in C++ programs? Explain how the control is transferred when exceptions occur during programs execution. Write a program to illustrate exception handling. (16)

19. (a) (i) Demonstrate runtime polymorphism with an example. (8)

(ii) Write short notes on RTTI and down casting. (8)

Or

(b) Discuss the different types of inheritance supported in C++ with suitable illustration. (16)

20. (a) Describe various methods for performing formatted I/O stream operations with an example. (16)

Or

(b) What are manipulators? Explain in detail about various manipulators used for Input Output operations with an example. (16)

