Question Paper Code: 41383

B.E. / B.Tech. DEGREE EXAMINATION, MAY 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. Which of the following is correct about class and structure?
 - (a) Class can have member functions while structure cannot
 - (b) Class data members are public by default while that of structure are private
 - (c) Pointer to structure or classes cannot be declared
 - (d) Class data members are private by default while that of structure are public by default
- 2. Which of the following operator is overloaded for object cout?

3. What will be the output of the following program?

| | (a) $a = 20 b = 300$ (c) $a = 20 b = garbage$ | | (b) $a = 20 b = 60$ (d) $a = garbage b = 300$ | | |
|-----|--|--|--|----------------------|--|
| | (c) $a = 200$ = garbage | | (d) $a = garbage b = 500$ | | |
| 4. | . Constructor is executed when | | | | |
| | (a) an object is created | | (b) an object is used | | |
| | (c) a class is declared | | (d) an object goes out of scope | | |
| 5. | The class which do not | e class which do not have static data members are known as | | | |
| | (a) simple class | (b) template class | (c) local class | (d) formal class | |
| 6. | From which of the following class of stream is derived? | | | | |
| | (a) istream | (b) ostream | (c) fstreambase | (d) Both (b) and (c) | |
| 7. | Which of the following access specifier is useful only in inheritance? | | | | |
| | (a) private | | (b) public | | |
| | (c) protected | | (d) private | and public | |
| 8. | is used to achieve run time polymorphism | | | | |
| | (a) operator overloading | | (b) function overloading | | |
| | (c) virtual function | | (d) virtual base class | | |
| 9. | Which of the following statement is correct? | | | | |
| | (a) A try block can have only one catch block | | | | |
| | (b) The try block can be followed by multiple catch blocks | | | | |
| | (c) The catch block can be followed by multiple try blocks | | | | |
| | (d) Multiple catch blocks can be followed by a try block | | | | |
| 10. | Choose the correct option which gives the current position of get pointer in a file. | | | | |

(a) seekg() (b) seekp() (c) tellg() (d) tellp()

PART - B (5 x 2 = 10 Marks)

11. Find the error in the following program. Justify it.

#include<iostream.h>
class Room
{
 int width, height;
 void setValue(int w, int h)
 {
 width=w;

```
height=h;
}};
void main()
{
room objRoom;
objRoom.width=12;}
```

- 12. List out the operators that cannot be overloaded in C++.
- 13. When is the catch block skipped?
- 14. Differentiate cross casting and down casting.
- 15. List the applications of OOPs.

PART - C (5 x
$$16 = 80$$
 Marks)

- 16. (a) (i) Explain the concepts of function overloading with an example. (10)
 - (ii) Develop a C++ program to count the number of objects using static member functions.(6)

Or

- (b) (i) Develop a C++ program to represent a class for a bank account which includes the following members: Name of the depositor, account number, type of account, balance amount. Member functions: to assign initial values, to deposit an amount, to withdraw an amount, to display name and balance. (10)
 - (ii) Outline the syntax of friend function. (6)
- 17. (a) (i) Develop a C++program to add two complex numbers which are passed as an object as arguments with binary operator overloading using friend function.(10)
 - (ii) Write short notes on wrapper classes. (6)

Or

- (b) Explain in detail about multiple constructors and dynamic allocation with suitable examples. (16)
- 18. (a) Apply various mechanisms used in exception handling with suitable examples. (16)

Or

(b) Explain in detail about function template with suitable example. (16)

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19. (a) Identify the need of runtime polymorphism by virtual functions with an appropriate example. (16)

Or

- (b) Analyze ambiguity faced in multiple inheritance. How it is being resolved. Explain with an example. (16)
- 20. (a) (i) Distinguish formatted and unformatted console I/O operations used in C++. (8)
 - (ii) List out various file mode parameters with an example. (8)

Or

(b) (i) Explain in detail about standard template library. (8)
(ii) Write short notes on namespace. (8)