Reg. No. :

Question Paper Code: 53204

B.E./B.Tech. DEGREE EXAMINATION, DEC 2020

Third Semester

Computer Science Engineering

15UCS304 - OBJECT ORIENTED PROGRAMMING WITH C++

(Regulation 2015)

Duration: 1.15 hrs   Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. Which feature can be implemented using encapsulation?   CO1- R

   (a) Inheritance   (b) Abstraction   (c) Polymorphism   (d) Overloading

2. What is the output of the following code   CO1-U

   char symbol[3]={'a','b','c'};

   for (int index=0; index<3; index++)

   cout << symbol [index];

   (a) a b c   (b) "abc"   (c) abc   (d) 'abc'

3. Can constructors be overloaded in derived class?   CO2- R

   (a) Yes, always   (b) Yes, if derived class has no constructor

   (c) No, programmer can't do it   (d) No, never

4. Given a class named *Book,* which of the following is not a valid   CO2-U
   constructor?

   (a) Book ( ) { }   (b)Book(Book b){ }

   (c) Book (Book &b) { }   (d)Book(char* author,char* title) { }

5. What do you call the languages that support classes but not polymorphism?   CO3- R

   (a) Class based language

   (b) Procedure oriented language

   (c) Object-oriented language

   (d) If classes are supported, polymorphism will always be supported

6. If a class C is derived from class B, which is derived from class A, all   CO3-R
   through public inheritance, then a class C member function can access

   (a) protected and public data only in C and B.   (b) protected and public data only in C.

   (c) private data in A and B.   (d) protected data in A and B.

7. A template class can have _____   CO4- R

   (a) More than one generic data type   (b) Only one generic data type

   (c) At most two data types   (d) Only generic type of integers and not characters

8. Exception handling is targeted at   CO4-R

   (a) Run-time error   (b) Compile time error   (c) Logical error   (d) All of the above.

9. Which header file is required to use file I/O operations?   CO5- R

   (a) <ifstream>   (b) <ostream>   (c) <fstream>   (d) <iostream>

10. To perform stream I/O with disk files in C++, you should   CO5-R

    (a) open and close files as in procedural languages.

    (b) use classes derived from ios.

    (c) use C language library functions to read and write data.

    (d) include the IOSTREAM.H header file.

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Electricity board charges the following rates to domestic users, it   CO1- U   (8)
    discourages large consumption of energy: FOR the first 100 units – 60
    paise per unit For next 200 units – 80 paise per unit Beyond 300 units
    – 90 paise per unit. All users are charged a minimum of Rs.50.00. If
    the total amount is more than Rs.300.00 than an additional surcharge
    of 15% is added. Write a C++ program to read the names of users and
    number of units consumed and print out the charges with names.

12. Define function overloading. Write a C++ program to define three   CO2- App   (8)

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overloaded functions to swap two integers, swap two floats and swap two doubles.

13. Write a program to design a class representing the information regarding digital library (books, tape: book & tape should be separate classes having the base class as media). The class should have the functionality for adding new item, issuing, deposit etc., the program should use the runtime polymorphism   CO3- U   (8)

14. Write a C++ program to implement the exception handling with rethrowing in exception.   CO4- App   (8)

15. What are the two methods of opening a file? Explain with examples. What is the difference between the two methods.   CO5- App   (8)

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