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Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (CSE) (2018 Batch) (Sem.-3)
OBJECT ORIENTED PROGRAMMING
Subject Code : BTCS-302-18
M.Code : 76437

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A

Write briefly :

1. Define inheritance. Name various types of inheritance.
2. What is a pure virtual function?
3. What is Data hiding? How it is achieved in C++?
4. What do you understand by array of class objects? Discuss with example.
5. What is function overloading? Give example.
6. Discuss the declaration and usage of static data members.
7. What are basic data types supported by C++?
8. Compare private, protected and public visibility modes.
9. Discuss C++ stream classes.
10. What are recursive functions? Give example.

SECTION-B

11. What is a friend function? Explain its importance with an example.
12. What do you mean by Multi level Inheritance? Explain with the help of an example.
13. Explain various types of constructor with examples.
14. Explain the declaration, accessing and usage of static data members with the help of suitable examples.
15. Show and explain how to open, close, read and write a file?

SECTION-C

16. Explain various control statements of C++ with suitable examples.
17. Define Polymorphism. Explain its types. How polymorphism is implemented in C++? Give suitable examples.
18. What do you mean by exception handling in C++? Write a program that throws an arithmetic exception as and when a number input is a negative number.

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SECTION-A

Write briefly :

1. Discuss the rules of Defining Constructors.
2. Write the use of function overloading.
3. Define this pointer.
4. What is an Abstract class?
5. Explain briefly what is Exception Handling?
6. What are C++ streams?
7. Define the term Multilevel Inheritance.
8. What is a friend function and friend class?
9. What are the different modes in which C++ file is opened?
10. Explain how memory is allocated to classes & objects?

SECTION-B

11. Explain with examples the different (Variable) storage classes used in C++.
12. What are the advantages of using new operator as compared to the function malloc()? Explain with examples.
13. What is object oriented programming? Explain any five characteristics of object oriented programming languages.
14. Explain public, private and protected access specifiers and show the ambiguity in multiple and multipath inheritance.
15. Explain the various techniques of defining pure virtual function.

SECTION-C

16. Define Operator Overloading. Explain how to overload unary operator and binary operator.
17. Describe the terms private inheritance and protected inheritance with the help of an example program.
18. What is file mode? Describe the various file mode options available.

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B.Tech. (CSE/ECE/IT/Electronics Engg/Electronics & Computer Engg)
(2012 to 2017) (Sem.-3)

OBJECT ORIENTED PROGRAMMING USING C++

Subject Code : BTCS-305

M.Code : 56595

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A

Answer briefly :

1. What is the use of an Abstract class?
2. What is a Friend function? Why is it required?
3. What are the properties of a static member function?
4. What is meant by Overloading Operators?
5. What are the differences between the Accesses specifies private and protected?
6. Explain briefly what Exception Handling is.
7. List the syntax of any two functions used to display output to the user in C++.
8. What are the differences between sequential and random access files?
9. What are Dangling Pointers?
10. What is the purpose of defining a Destructor function?

SECTION-B

11. What is Object Oriented Programming? Distinguish between Procedure Oriented Programming and Object Oriented Programming.
12. Write a program in C++ to print first N prime numbers, where N is the integer value entered by user.
13. Explain the concepts of Function Overloading and Function Overriding with the help of examples.
14. What is a Template? Explain with the help of an example how to create a Function Template.
15. Explain the concept of Virtual and Pure Virtual Functions with the help of examples.

SECTION-C

16. Create a class which keeps track of the number of its instances and also assigns unique identification to each of them. Use static data member, constructors and destructors to maintain updated information about active objects.
17. What is inheritance? Explain with example how to inherit a class in C++. Also show in what order the constructors are called in a class hierarchy when an object of a derived class is created?
18. What are the two methods available for opening the files? Write a program to write characters onto a file and to read characters from a file.

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