

CBCS SCHEME



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15EC562

Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020 Object Oriented Programming Using C++

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain the structure of C++ program. List the applications of C++. (08 Marks)
b. How dynamic memory allocation and freeing the memory performed with the help of new and delete operators? Explain with suitable examples. (08 Marks)

OR

- 2 a. What is reference variable in C++? Explain with suitable program. (06 Marks)
b. Describe, with examples, the uses of enumeration data types and also mention differences in the implementation of enum data type in ANSI C and C++. (06 Marks)
c. Explain selection control structure statements of C++. (04 Marks)

Module-2

- 3 a. Define recursion? Write a C++ program to calculate factorial of a given number using recursive function. (06 Marks)
b. What are the parameter techniques supported by C++? Explain the call by reference with reference arguments with swapping of two integer program. (05 Marks)
c. What is a class? Explain the class specification with an example. (05 Marks)

OR

- 4 a. What is an object? List the salient features of an object. (03 Marks)
b. What are access specifiers? How many access specifiers are used in C++? Explain with examples. (06 Marks)
c. What is a friend function? What are the characteristics of friend function, explain with an example program. (07 Marks)

Module-3

- 5 a. Define constructor? What are the characteristics of constructor, explain with an example program. (08 Marks)
b. What is operator overloading? What are the steps involving in operator overloading, write a C++ program to add two complex numbers by overloading '+' operator. (08 Marks)

OR

- 6 a. Define destructor? What are the characteristics of destructors? Explain with an example program. (07 Marks)
b. Mention the operators that cannot overloaded in C++. (02 Marks)
c. Explain the overloading of unary operators with an example program. (07 Marks)

Module-4

- 7 a. What is inheritance? Explain the different types of inheritance and syntax of defining derived classes. (07 Marks)
b. What is virtual function? What are the rules for virtual functions? (05 Marks)
c. Define pure virtual function. Explain the pure virtual function with an example program. (04 Marks)

10 JAN 2020

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.

OR

- 8 a. Explain the single inheritance with an example program. (08 Marks)
b. Explain the concept of polymorphism is incorporated in C++, explain with an example. (08 Marks)

Module-5

- 9 a. What is Stream? List and explain the classes used for console I/O stream operations. (05 Marks)
b. Explain the ios class functions and flags used for formatting output. (05 Marks)
c. Write a program in C++ to copy content of one file into another file until end of file is reached display the copied content on the output screen. (06 Marks)

OR

- 10 a. Describe the various classes available for file operations. (06 Marks)
b. Explain how while (fin) statement detects the end of a file that is connected to fin stream. (03 Marks)
c. Explain opening a file with constructor function and opening a file with open () function with suitable examples. (07 Marks)

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