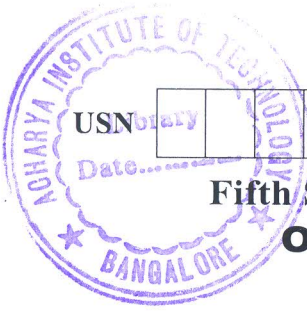


CBCS SCHEME

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)

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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