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10CS36

Third Semester B.E. Degree Examination, Dec.2019/Jan.2020

Object Oriented Programming with C++

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least TWO questions from each part.

PART – A

- 1 a. Differentiate between object oriented programming and procedure oriented programming. (10 Marks)
b. Define objects. Create a class CAR with following features: Name, Color, Price. Display the names of all cars costing more than 5 lakhs. (10 Marks)
- 2 a. How you can make member functions inline? Give an example. (06 Marks)
b. Write a C++ program to count the number of objects of a certain class. (06 Marks)
c. How non member functions can access the member of a class? Explain with examples. (08 Marks)
- 3 a. Define a suitable parameterized constructor with default values for class DISTANCE with data members feet and inches. (06 Marks)
b. Write a program to add and multiply operations using overloaded + and * operators. (08 Marks)
c. Explain 'new' and 'delete' operators with example. (06 Marks)
- 4 a. What is the ambiguity that might arise in multiple inheritances? How to overcome this? Explain with an example. (06 Marks)
b. What is inheritance? Explain the different types of inheritance possible in C++. (14 Marks)

PART – B

- 5 a. How to pass arguments to a constructor in a base class? (06 Marks)
b. What is protected in C++? How protected access specifier behave in a single class? (08 Marks)
c. What is function overriding? (06 Marks)
- 6 a. What are the differences between virtual functions and pure virtual functions? (06 Marks)
b. What is an abstract base class? Why we cannot have virtual constructors? (06 Marks)
c. What are the differences between early binding and late binding? (08 Marks)
- 7 a. What are manipulators? Explain any two manipulators with examples. (10 Marks)
b. Explain the functions:
(i) seekp() (ii) tellp() (iii) seekg() (iv) read() (v) write() (10 Marks)
- 8 a. How the base class exceptions and derived class exceptions are handled? Explain with examples. (10 Marks)
b. Write a program to demonstrate creation and manipulation of vectors. (10 Marks)

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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.