

3E1139

Roll No. _____

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3E1139

B. Tech. III - Sem. (Main / Back) Exam., Dec. 2019

PCC Computer Science & Engineering

3CS4-06 Object Oriented Programming

Common For CS, IT

Time: 3 Hours

Maximum Marks: 120

Instructions to Candidates:

Attempt all ten questions from Part A, five questions out of seven questions from Part B and four questions out of five from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

*Use of following supporting material is permitted during examination.
(Mentioned in form No. 205)*

1. NIL

2. NIL

PART – A

(Answer should be given up to 25 words only)

[10×2=20]

All questions are compulsory

- Q.1 What is dynamic binding? How it is useful in OOP?
- Q.2 List a few areas of application of OOP technology.
- Q.3 What is dynamic initialization of a variable? Give example of C++.
- Q.4 What is the difference between following two statements:
- (a) Char * const i;
- (b) Char const * i;

- Q.5 List some properties of constructor.
- Q.6 Explain Importance of destructors.
- Q.7 What is operator overloading?
- Q.8 What is abstract class?
- Q.9 Explain generic programming and its implementation in C++.
- Q.10 What is exception and how can we handle it.

PART – B

(Analytical/Problem solving questions)

[5×8=40]

Attempt any five questions

- Q.1 Write a function using reference variables to swap the values of two integers.
- ✓ Q.2 Define a class in C++ to represent a Bank account. Take Assumptions for Data & Member functions. <http://www.rtuonline.com>
- Q.3 Explain constructor overloading with suitable example.
- Q.4 Derive a class from a base class which is having a pure virtual function. Write C++ code.
- Q.5 Write a Program to copy contents of one text file to other.
- Q.6 Write a program to show the application of multiple catch statements.
- Q.7 What is friend function? Write code to explain it.

PART – C

(Descriptive/Analytical/Problem Solving/Design Questions) [4×15=60]

Attempt any four questions

- Q.1 What is Multiple Inheritance? How Ambiguities can be resolved in Multiple Inheritance. Show by suitable code.
- Q.2 Define a class to create, update & manage online shopping list of a customer. Take your own Assumptions for Data & Member Functions.
- Q.3 Write a C++ Program to overload '+' operator for string concatenation.
- Q.4 With the help of suitable code explain Runtime Polymorphism.
- Q.5 Prepare a Swap Function Containing template arguments to swap the content of two variables of type "int", "char" & "float".
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