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Sr. No. 003504

December 2023

B.Tech (CE/IT/CE(Hindi Medium)/CSE(AIML)/CSE)V SEMESTER
Object Oriented Programming (PCC-CS-503)

Time: 3 Hours

Max. Marks: 75

- Instructions:**
1. It is compulsory to answer all the questions (1.5 marks each) of Part -A in short.
 2. Answer any four questions from Part -B in detail.
 3. Different sub-parts of a question are to be attempted adjacent to each other.

PART -A

- Q1 (a) Differentiate between abstract classes and concrete classes (1.5)
(b) What is generic programming? (1.5)
(c) Differentiate between function overloading and function overriding (1.5)
(d) List different types of constructors. (1.5)
(e) What is the need of declaring a member of a class static? (1.5)
(f) How is Encapsulation implemented in C++? (1.5)
(g) What do you mean by Data Models? (1.5)
(h) What are action Listeners? (1.5)
(i) What is SortedMap interface? (1.5)
(j) What do you mean by wildcards? (1.5)

PART -B

- Q2 (a) What is Object Oriented Programming ? How is it different than Procedure Oriented Programming? (10)
(b) What is the need of type conversion? Discuss different types of type conversion in C++. (5)
- Q3 (a) When do we declare a class virtual? Explain with a suitable example. (5)
(b) Write a program to add two complex numbers using object as arguments. (10)
- Q4 A class template is known as a parameterized class. Comment. Write a C++ program using function template to find the product of two integer or floating point type of data. (15)
- Q5 (a) Write down a C++ program to implement function overloading. (5)
(b) What is the role of layout? Explain Border layout with a suitable example (10)
- Q6 (a) What are design patterns? Explain different types of design patterns with the help of a suitable example. (10)
(b) Differentiate between set and list interface. Explain any 5 methods used in the list interface. (5)
- Q7 Write short notes on: (any three) (15)
a) Software testing
b) Data hiding
c) Exception
d) Swing Components