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Program: B.Tech. Semester: 3<sup>RD</sup>

Name of Subject: Object Oriented Programming

Subject Code: PCCS-101 Paper ID: 16010

Time Allowed: 03 Hours

Max. Marks: 60

NOTE:

1) Parts A and B are compulsory

2) Part-C has Two Questions Q8 and Q9. Both are compulsory, but with internal choice

3) Any missing data may be assumed appropriately

Part - A

[Marks: 02 each]

01.

a) Define Encapsulation.

b) List the operators that cannot be overloaded.

c) Compare static and dynamic binding.

d) Explain the term Input stream.

e) Distinguish between null and void pointers.

f) Design a C++ program to illustrate the concept of function overriding.

Part - B [Marks: 04 each]

Q2. Compare object oriented programming and procedure oriented programming. Make use of appropriate syntax wherever necessary.

Q3. Explain the break and continue statements. Also write programs for both highlighting the difference between them.

Q4. Illustrate the concept of static data members and static member functions in C++ with the help of suitable program.

Q5. Design a C++ program to add two complex numbers using binary operator overloading.

Q6. Justify the advantage of virtual base class using a program.

Q7. Discuss the term 'Memory Leak' in detail.

Part - C [Marks: 12 each]

Q8. Illustrate the concept of constructors and destructors in C++ with the help of suitable programs.

OR

Discuss the concept of friend function with example. Also elaborate the advantages and disadvantages of this function.

Q9. Discuss the exception handling mechanism. Write a program for rethrowing an exception.

OR

Explain file pointers in detail. Also write a program justifying their use.