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Examination: Odd Semester Examination 2025

Paper Name: Object Oriented Programming **Paper Code: MCA-101**

Time: 2.30Hours (10:00AM To 12:30PM) **Maximum Marks: 60**

Note: This question paper has two sections : Section A and Section B. Assume missing data, if any.
Attempt (i) Section-A: All questions are compulsory.
(ii) Section-B: Attempt any FOUR QUESTIONS.

Section –A (All questions are compulsory) **4×5=20 Marks**

Q1. Explain the need for constructors in OOP.	CO1	BL2
Q2. Compare between Composition and Classification Hierarchies.	CO2	BL1
Q3. Write a program to display array elements using template function with it's output.	CO3	BL3
Q4. Discuss why reference must be initialized at the time of declaration.	CO3	BL4

Section –B (Attempt any Four questions) **4×10=40 Marks**

Q1. Explain all unformatted input functions in C++ with syntax and examples.	CO2	BL4
Q2. Discuss polymorphism using inheritance and pointers.	CO4	BL3
Q3. Write about function overriding in detail with diagram and example.	CO4	BL6
Q4. What is access control in class hierarchy?	CO5	BL2
Q5. i) Write a program to show virtual destructor with smart pointers. Also write an output of it. ii) Write a program to show virtual destructor with abstract class. Also write an output of it.	CO5	BL5
Q6. Discuss the basic principles of OOP: • Encapsulation • Abstraction • Inheritance • Data hiding	CO2	BL2