Department of Computer Applications

MCA – I[st] Year Semester – I

Session 2021-22 Branch: MCA

Class Test-I Subject Code: CA261101

Subject Name: C++ Programming and Data Structure

Max. Marks: 40 Min. Marks: 16

Course Outcomes (CO):

CO1: Students will be able to understand the concepts of programming designing and learn about object oriented programming concepts and features of OOPs using C++

CO2: Students learns about importance of Inheritance and Polymorphism.

CO3: Students will be able to understand Linear data structures(such as arrays, linked lists, stacks, queues, priority queues.

CO4: Student learns about concepts of Non Linear Data Structures (such as trees, graphs and their applications).

CO5: Students will be able to write and implement various sorting and searching algorithms.

Note: Attempt all questions. Part (a) is compulsory & attempt any two parts from (b), (c) & (d).

Unit-I					
Question No.	Questions	Marks	CO	BL	PI
1 a)	Explain call by reference with example.	4	CO1	L1	1.1.1
1 b)	What is the importance of constructor and destructor? Explain different types of constructor with suitable example.	8	CO1	L2	1.1.2
1 c)	Why friend functions in C++ programming required? Explain with suitable example.	8	CO1	L3	1.1.2
1 d)	Define function overloading? Write a program to find out area of triangle, rectangle and circle using function overloading. **Or** Define operator overloading? Write a program to overload unary minus operator in c++ Programming.	8	CO1	L3	1.1.2
2a)	Draw the table to show the rules of inheritance for various available visibility mode.	4	CO2	L2	1.1.1
2b)	Define static data member and member function with example	8	CO1	L3	1.1.2
2c)	What is multiple inheritance. What are the ambiguities in multiple inheritance and how it can be resolved?	8	CO2	L3	1.1.2
2d)	What is the need of inheritance in programming? Explain different types of inheritance.	8	CO2	L4	1.1.2

BL – Bloom's Taxonomy Levels (1- Remembering, 2- Understanding, 3- Applying,4 - Analyzing, 5- Evaluating, 6- Creating)

CO – Course Outcomes; PO – Program Outcomes; PI Code – Performance Indicator Code