CBCS SCHEME
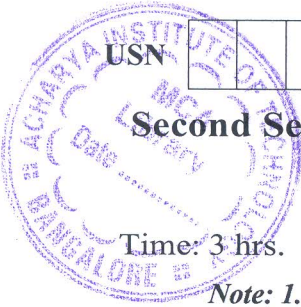
BPLCK205D/BPLCKD205

Second Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024
Introduction to C++ Programming

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

			M	L	C
Module – 1					
Q.1	a.	Explain the structure of C++ program with syntax and example.	10	L2	CO1
	b.	Define the following terms with an example : i) Object ii) Classes iii) Methods iv) Abstraction v) Encapsulation.	10	L1	CO1
OR					
Q.2	a.	List the features and benefits of Object Oriented Programming.	10	L1	CO1
	b.	Explain the importance of Polymorphism in C++.	5	L2	CO1
	c.	Write a C++ Program to display as follows : Semester / Subject Name: I / C++ Programming II / Python Programming III / Data Structures IV / Design and Analysis Algorithms	5	L3	CO1
Module – 2					
Q.3	a.	Define Token and explain its types with suitable examples.	10	L2	CO2
	b.	List out the differences between Structures and Unions.	5	L2	CO2
	c.	With example C++ program, describe Scope resolution Operator.	5	L2	CO2
OR					
Q.4	a.	Explain Operators in C++ with suitable examples.	10	L2	CO2
	b.	Explain Inline function with suitable C++ code segment.	10	L2	CO2
Module – 3					
Q.5	a.	Explain Parameterized constructors and Copy constructors with suitable examples.	10	L2	CO3
	b.	Explain Destructors with syntax and suitable example.	10	L2	CO3
OR					
Q.6	a.	Explain Single inheritance and write a C++ program to demonstrate student name, age and marks using single inheritance.	10	L3	CO3

The table in Q.2(c):

Semester	Subject Name
I	C++ Programming
II	Python Programming
III	Data Structures
IV	Design and Analysis Algorithms

	b.	Suppose we have three class vehicle , Four wheeler and Car. The class vehicle is the base class, the class Four wheeler is derived from it the car class is derived from the class Four wheeler. Class vehicle has a method 'Vehicle' that prints 'I am a vehicle' , Class Four wheeler has a method 'Four Wheeler' that prints 'I have Four Wheels' and class car has a method 'Car' that prints 'I am a Car'. So as this is a multi – level inheritance, we can have access to all other classes methods from object of the class car. We invoke all the methods from a car object and print the corresponding output of the methods. So if we invoke the methods in this order. Car ( ) , Four Wheeler ( ) and Vehicle ( ) then the output will be I am a Car I have four wheels I am a vehicle. Write a C++ program to demonstrate using this.	10	L3	CO3
		Module – 4			
Q.7	a.	Describe the following functions with its syntax in text files : i) open ii) close iii) read iv) write.	10	L2	CO4
	b.	Write a C++ program to create a text file, check file created or not, if created it will write some text into the file and then read the text from the file.	10	L3	CO4
		OR			
Q.8	a.	With a neat diagram, explain stream class hierarchy in C++.	10	L2	CO4
	b.	Write a C++ program to write and read time in / from binary file using f stream.	10	L3	CO4
		Module – 5			
Q.9	a.	Define Exception Handling. Explain exception handling mechanism.	10	L2	CO4
	b.	Explain throwing and catching mechanism.	10	L2	CO4
		OR			
Q.10	a.	Discuss catch all exceptions with syntax and suitable example program.	10	L2	CO4
	b.	Write a function which throws a division by zero exception and catch it in catch block. Write a C++ program to demonstrate usage of try, catch and throw to handle exception.	10	L3	CO4

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