CBCS SCHEME

BPLCK105D/BPLCKD105

First 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. VTU Formula Hand Book is permitted.
3. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	What is C++? List the applications and features of the C++.	10	L1	CO1
	b.	Describe the structure of C++ program with an example.	10	L2	CO1
		OR			
Q.2	a.	Explain message passing with an example.	10	L2	CO1
	b.	What are abstract classes? Discuss with an example.	10	L2	CO1
		Module – 2			
Q.3	a.	Write a C++ program to swap 2 values by writing a C++ function that uses call by reference technique.	10	L3	CO2
	b.	Explain expressions and their types with suitable examples.	10	L2	CO2
		OR			
Q.4	a.	Write a C++ program to narrate use of inline functions.	10	L3	CO2
	b.	Explain keywords, identifiers and constant with suitable example.	10	L2	CO2
		Module – 3			
Q.5	a.	Define constructor with syntax and explain with an example.	10	L2	CO3
	b.	Describe the importance of destructor and explain it with a suitable C++ program.	10	L2	CO3
		OR			
Q.6	a.	Suppose we have three classes vehicle, four wheeler and car. The class vehicle is the base class, the class fourwheeler is derived from it and the class car is derived from the class fourwheeler, class vehicle has a method 'vehicle' that prints 'I am a vehicle'. Class fourwheeler has a method 'fourwheeler' 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 the other classes methods from the object of the class car. We invoke all the methods from a car object and print the corresponding outputs 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 multilevel inheritance using this.	10	L3	CO3

	b.	Explain the concept of default arguments in functions, with a concrete example.	10	L2	CO3
Module – 4					
Q.7	a.	List the difference between text file handling and binary file handling in C++.	10	L1	CO4
	b.	Define the concept of a class hierarchy in C++ with an example that illustrate the hierarchy with at least three classes.	10	L3	CO4
OR					
Q.8	a.	Write the various functions used to open, close, read and write in text files.	10	L2	CO4
	b.	Write a C++ program to write and read time in/from binary file using fstream.	10	L3	CO4
Module – 5					
Q.9	a.	Define the concept of exception handling in C++. Explain how it differs from traditional error-handling methods.	10	L2	CO4
	b.	Write C++ program function which handles array of bounds exception using C++.	10	L3	CO4
OR					
Q.10	a.	Describe the role of the throw statement in C++ exception handling.	10	L2	CO4
	b.	List and briefly explain two predefined exceptions in C++. How are these exceptions commonly used in practice?	10	L2	CO4

* * * * *