

Week	Topics	Assignments / Programming Examples
1	<b>BASIC SYNTAX</b> (C++ Program Structure, Compile & Execute, Semicolons & Blocks, Identifiers, Keywords, Comments, input <b>cin</b> , output <b>cout</b> , and Whitespace).	*Write Program that outputs <b>Hello, World!</b> on the screen. <u>This question tests basic input/output operations and string manipulation in C++. It evaluates the ability to use cin for input and cout for output.</u>
2	<b>DATA TYPES and VARIABLES</b> (Integer, Floating-point, Boolean, Character, String, Variable Definition & Declaration & Scope, Initializing Local and Global Variables, and Constants).	*Write a C++ program to take two integer inputs from user and print sum and product of them. <u>This question builds arithmetic operations and basic data type handling. It assesses the candidate's ability to perform calculations and handle user input.</u>
3	<b>OPERATORS</b> (Arithmetic, Relational, Logical, Assignment) and Operators Precedence.	*What is the output? <pre>int a = 3, i = 12, j = 14, k = 16; a += 2 * i++ % 5 * 4 + --j - 3 / k + 2; cout &lt;&lt; a;</pre> <u>This question tests the understanding of operators precedence</u>
4 & 5	<b>DECISION-MAKING STATEMENTS</b> (if, if...else, if...else if, Nested if).	*Write a program that asks the user to input an integer and then prints whether the number is even or odd. <u>This question tests the understanding of conditional statements (if-else). It evaluates the ability to use logical expressions to make decisions.</u>
6 & 7	<b>LOOP</b> (While, for, do...while, Loop Control Statements (Break & continue) Infinite Loop, and nested Loops.	*Print prime numbers between 1 to 200 <u>This question tests the understanding of iteration through the code and using the looping statements.</u>
8	<b>Review and Mid Exam</b>	
9 -11	<b>FUNCTIONS</b> (User Defined Functions, Definitions & Declarations, Arguments, Call by Value & Reference, Prototypes, Default Values, and Overloading.	*Write a function that take your name and prints a message: <u>Welcome, 'your name'.</u>
12-14	<b>ARRAYS_1D&amp;2D</b> (Declaring, Initializing, Accessing Array Elements, and Passing Arrays to Functions).	Declare an array alpha of 15 components of type int.
<b>Review and Final Exam</b>		

Learning Outcomes	Sample Questions
<b>a1. Illustrate</b> basic concepts on C++ commands and code segments.	* <b>(True or False)</b> Increment and decrement operators have the precedence over the other arithmetic operators. * <b>Choose the correct answer:</b> Which of the following is not valid C++ expression? A. 33 / 9 / 3      B. 23 % ( 5 % 2 )      C. 34 ( 7 / 3 )      D. None
<b>a2. Construct</b> C++ code to solve basic problems and some real word cases.	<b>Write a C++ function</b> called isOdd that takes an integer as a call-by-value argument and returns true or false indicating whether the number is odd or not?
<b>b1. Evaluate</b> C++ code using problem-solving techniques and constraints.	<b>what is the output of the following:</b> <pre>for (int i = 4; i &gt;= 2; i--) {     for (int j = 1; j &lt;= i; j++) {         cout &lt;&lt; j &lt;&lt; " ";     }     cout &lt;&lt; endl; }</pre>