--Question Starting--
Match the following programming concepts in C++ with their most accurate descriptions:
1. Tokens, Identifiers, Variables, and Constants 2. Overloading, Inheritance, Templates, Exception and Event Handling 3. Streams and Files, Multifile Programs 4. Control Statements, Functions Parameter Passing, Virtual Functions, Class and Objects
Choose the correct answer from the options given below:
(1) 1-A, 2-D, 3-B, 4-C
(2) 1-C, 2-B, 3-D, 4-A
(3) 1-D, 2-C, 3-A, 4-B
(4) 1-A, 2-B, 3-D, 4-C
Answer Key: 2
Solution:
- Tokens, Identifiers, Variables, and Constants: These are the fundamental building blocks in C++ used to define syntax elements and data.
- Overloading, Inheritance, Templates, Exception and Event Handling: These are advanced features facilitating code reuse, runtime behavior, and exception safety.
- Streams and Files, Multifile Programs: These relate to input/output handling, file operations, and organizing large programs across multiple files.
- Control Statements, Functions Parameter Passing, Virtual Functions, Class and Objects: These are core concepts related to program flow control, parameter management, polymorphism, and object-oriented programming.
Hence, Option (2) correctly matches the topics with their descriptions.

--Question Starting--
2. Match the following design techniques with their operational strategies:
1. Divide and Conquer 2. Dynamic Programming 3. Greedy Algorithms 4. Backtracking
Choose the correct answer from the options given below:
(1) 1-B, 2-C, 3-D, 4-A
(2) 1-A, 2-D, 3-C, 4-B
(3) 1-C, 2-A, 3-B, 4-D
(4) 1-D, 2-B, 3-A, 4-C
Answer Key: 2
Solution:
- Divide and Conquer: Breaks a problem into subproblems, solves each independently, and combines solutions.
- Dynamic Programming: Solves problems by storing solutions to overlapping subproblems for optimality.
- Greedy Algorithms: Makes the optimal choice at each step without reconsideration, aiming for a global optimum.
- Backtracking: Explores all possibilities by building incrementally and abandoning paths that fail constraints.
Hence, Option (2) accurately associates the techniques with their operational strategies.

--Question Starting--
3. Match the following cloud service models and IoT concepts with their defining features:
1. SaaS, PaaS, IaaS 2. Virtualization, Virtual Server, Cloud Storage, Database Storage 3. Resource Management, Service Level Agreement, Basics of IoT 4. Public Cloud, Private Cloud
Choose the correct answer from the options given below:
(1) 1-D, 2-C, 3-B, 4-A
(2) 1-A, 2-D, 3-C, 4-B
(3) 1-B, 2-A, 3-D, 4-C
(4) 1-C, 2-B, 3-A, 4-D
Answer Key: 3
Solution:
- SaaS, PaaS, IaaS: These are cloud service models with increasing levels of control and abstraction.

- Virtualization, Virtual Server, Cloud Storage, Database Storage: These relate to resource abstraction, flexible allocation, and data management in cloud computing.
- Resource Management, Service Level Agreement, Basics of IoT: Key aspects for maintaining quality, resource allocation, and foundational IoT understanding.
- Public Cloud, Private Cloud: Deployment models indicating accessibility, security, and ownership.
Hence, Option (3) correctly matches the cloud computing and IoT concepts with their features.