8. Foundations of Coding – Mastering the Basics

Worksheet

A. Choose the correct option:

1. What is the purpose of a flowchart in programming?

   (a) To define algorithms

   (b) To execute code

   (c) To represent program logic visually

   (d) To write code efficiently

2. What is the primary function of an algorithm in coding?

   (a) To design a flowchart

   (b) To represent program logic

   (c) To execute code

   (d) To define a step-by-step solution to a problem

3. In the context of algorithms, what are the characteristics that make them effective?

   (a) Complexity and ambiguity

   (b) Simplicity and clarity

   (c) Repetition and redundancy

   (d) Length and verbosity

4. What is the main purpose of a flowchart in the context of programming?

   (a) To write code

   (b) To execute code

   (c) To represent the logic of a program visually

   (d) To design algorithms

5. Which of the following is a disadvantage of using algorithms?

   (a) Increased efficiency

   (b) Ambiguity in problem-solving

   (c) Clarity in logic

   (d) Simplicity in design

6. What is the purpose of symbols in a flowchart?

   (a) To make the flowchart colourful

   (b) To represent data types

   (c) To represent program logic visually

   (d) To write code efficiently

7. What does the term "coding" specifically refer to in programming?

   (a) Writing algorithms

   (b) Designing flowcharts

   (c) Converting an algorithm into a programming language

   (d) Testing a program

8. What defines the step-by-step instructions for solving a specific problem in programming?

   (a) Coding

   (b) Algorithm

   (c) Flowchart

   (d) Testing

9. What is an advantage of using flowcharts in programming?

   (a) Increased efficiency

   (b) Ambiguity in problem-solving

   (c) Visual representation of program logic

   (d) Redundancy in code

10. What is a potential disadvantage of using flowcharts in programming?

    (a) Increased efficiency   (b) Clarity in logic

    (c) Complexity in design   (d) Simplicity in representation

B. Rewrite the statements correcting the mistakes in it.

1. Coding refers to designing flowcharts.
2. Steps Involved in Coding only include writing lines of code.
3. Characteristics of Algorithms include complexity and ambiguity.
4. Disadvantages of Algorithms involve increased efficiency.
5. Flowchart: Definition is primarily to represent data types visually.