

Computer Science Fundamentals

Computer Science · Practice Test · 12 Questions

1. What is the fundamental unit of information in computing, representing either a 0 or a 1?

- A) Byte
- B) Word
- C) Bit
- D) Nibble

2. Which programming paradigm is characterized by the use of objects, which are instances of classes, and their interactions?

- A) Functional Programming
- B) Procedural Programming
- C) Object-Oriented Programming
- D) Declarative Programming

3. What is the term for a set of instructions that a computer can execute to perform a specific task?

- A) Algorithm
- B) Data Structure
- C) Hardware
- D) Software

4. In computer networking, what protocol is primarily used for transmitting web pages over the internet?

- A) FTP
- B) SMTP
- C) HTTP
- D) DNS

5. What is the name of the first widely successful high-level programming language, developed in the 1950s for scientific and engineering applications?

- A) COBOL
- B) LISP
- C) BASIC
- D) FORTRAN

6. Which data structure follows the Last-In, First-Out (LIFO) principle?

- A) Queue
- B) Stack
- C) Linked List
- D) Tree

7. What does the acronym 'CPU' stand for in the context of computer hardware?

- A) Computer Processing Unit
- B) Central Personal Unit
- C) Central Processing Unit
- D) Computer Program Unit

8. What is the process of finding and fixing errors in a computer program called?

- A) Compilation
- B) Interpretation
- C) Debugging
- D) Execution

9. Which sorting algorithm has an average and worst-case time complexity of $O(n^2)$?

- A) Merge Sort
- B) Quick Sort
- C) Bubble Sort
- D) Heap Sort

10. What is the primary function of an operating system?

- A) To run individual applications
- B) To manage computer hardware and software resources
- C) To connect to the internet
- D) To perform complex calculations

11. Who is often credited with inventing the first compiler (A-0 System)?

- A) Alan Turing
- B) Grace Hopper
- C) Tim Berners-Lee
- D) Bill Gates

12. What is the term for a sequence of operations that is guaranteed to terminate and produce a result?

- A) Algorithm
- B) Heuristic
- C) Random Process
- D) Loop