prep week

computer basics

The following exercise contains the following subjects:

- computer structure and functions

Instructions

1. What is binary code, and why is it important in computing?

2. How many digits are there in the binary number system, and what are they?

3. Explain what a bit and a byte are in computing.

4. What is the role of transistors in computer circuits?

5. Describe the function of the Central Processing Unit (CPU) in a computer

6. What is the difference between RAM and ROM in computer memory?

7. Explain the concept of a logic gate and provide an example.

8. How do logic gates like AND, OR, and NOT contribute to computing?

9. Describe the binary representation of numbers in a computer.

10. What is ASCII, and how does it relate to character encoding in computing?

11. Explain how a CPU processes instructions using the fetch-decode-execute cycle.

12. What is a motherboard, and what role does it play in a computer's architecture?

13. Describe the concept of a CPU cache and its importance in computer performance.

14. How does a hard drive store data magnetically, and what are sectors and clusters?

15. What is Moore's Law, and how has it influenced the development of computer hardware?