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[TIPS: \_\_\_\_\_/20]

1. Match each of the following terms with one appropriate phrase from the list below, which describes the term. Place the letter of the correct phrase in the space beside the term.

RAM     a    
ALU     f    
[4] ROM     c    
BIOS     b  

- a. It creates, updates, deletes, and copies files.
  - b. A set of instructions that allows the computer to recognize the hardware that is used.
  - c. It is a memory chip used to permanently store computer's start-up instructions. Memory contents recorded when the computer is built.
  - d. It controls the computer's hardware.
  - e. It stores programs, data or information from I/O devices.
  - f. It performs comparisons, arithmetic and simple logic operations.
2. Define the following terms: [3] (One mark for each definition)
- a) Structured Programming  
Structured programming is a programming style that uses: linear sequencing, repetition, and selection.
  - b) high-level language  
A high-level language may use natural language elements, be easier to use, or may automate significant areas of computing systems, making the process of developing a program easier to understand and execute than lower-level programming languages.
  - c) program  
A computer program is a collection of instructions that performs a task when executed by a computer.

3. What type of memory is used to permanently store a complete application program?  
(HINT: your software applications are installed there) [2]

4. Write the name of the hardware component that is described by each statement. [4]

Control Unit	Maintains the order of entire system by directing the data to the appropriate places.
RAM	Temporarily stores copies of all programs that are currently executed by the CPU.
ROM	Stores computer's start-up instructions.

5. A personal computer has a Pentium 650 MHZ processor. Approximately how many instructions per second does this processor execute? [2]

This processor would be able to execute approximately 650 million instructions per minute. This is proven by it's rating of 650 MHZ.

6. Describe, using one complete sentence, the function (or purpose) of the accumulator. [2]

An accumulator is a part of the ALU (Arithmetic-Logic Unit) of a processor. It is used for temporary storage of 8-bit data and to perform arithmetic operations such as addition, subtraction, multiplication, division or logical operations like AND, OR, XOR etc. The operation's result is stored in the accumulator.

7. What is access time in memory? Which memory works faster based on access time (Primary or secondary)? [3]

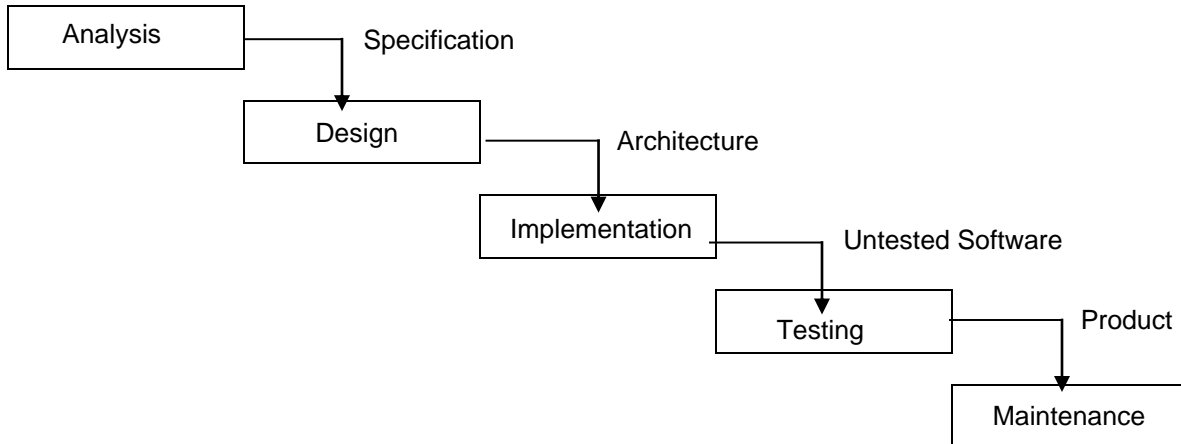
Access time is the time a program or device takes to locate a single piece of information and make it available to the computer for processing.

Instructions:

In your text, read Pages 60 – 90.

8. On this sheet, draw a clearly labeled diagram that shows all steps in the **Waterfall Model of Software Development**. [5]

**The Waterfall Model of Software Development**



9. In point form on a separate sheet of paper, answer all of the seven questions on P. 90 of your text. Questions 1, 3 – 7 are worth two (2) marks each. Question 2 is worth 3 marks. [15]